Vol 6 No 7

The Australian COMMODORE and AMIGA REVIEW

July $3.50*

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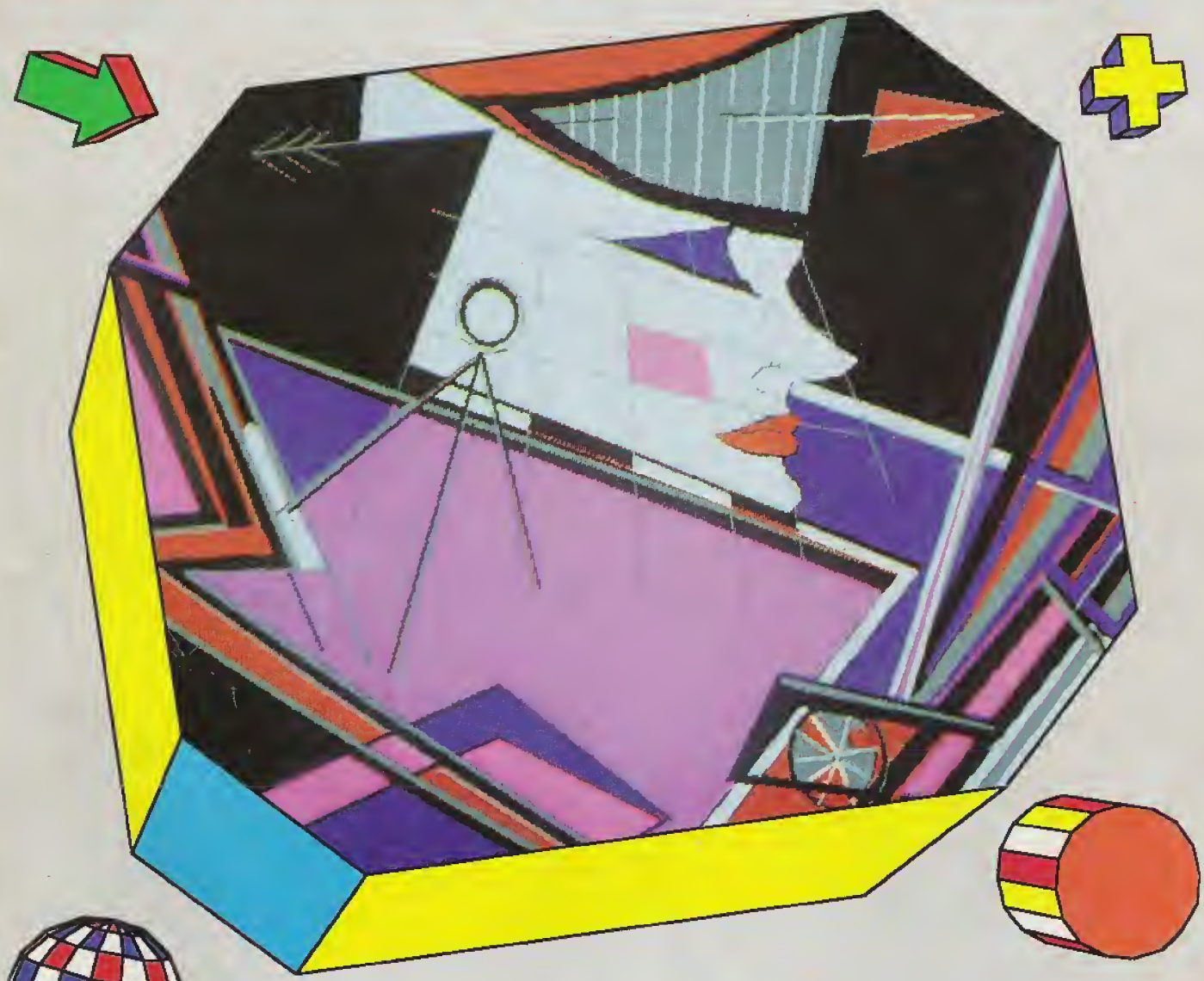

- Page Stream
- Professional Draw
- HP Paintjet Printer
- C64 Software
- Parser for the 128
- The Parallel RS232

Space Harrier, Crazy Cars II
Mercenary, Falcon, Cosmic Bouncer
Bombuzal

- High Scores
- Hints and Tips
- Adventurer's Realm

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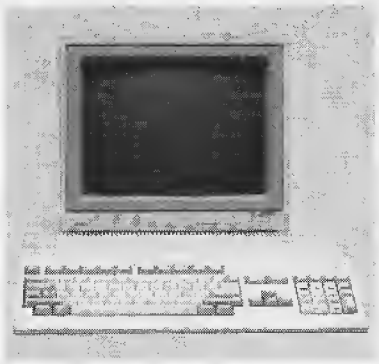
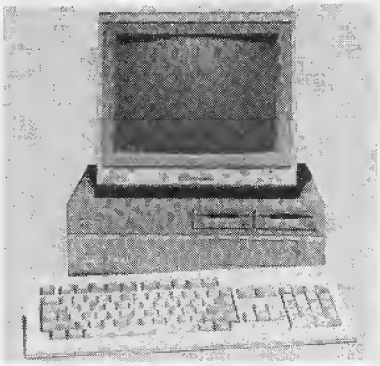


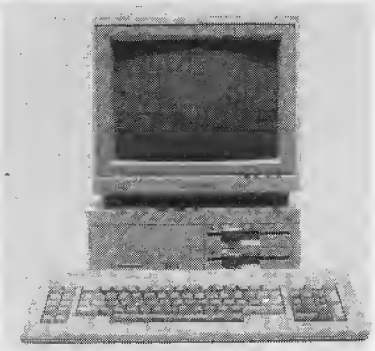
Commodore Amiga 500

With features such as multitasking and upgrading options, it's Australia's best selling small business computer.*



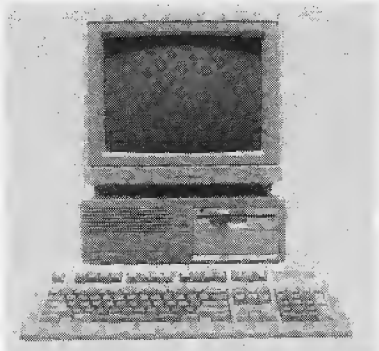
Commodore Amiga 2000

A true investment, because of its capability to expand, it offers multitasking to ensure versatility and increased productivity.



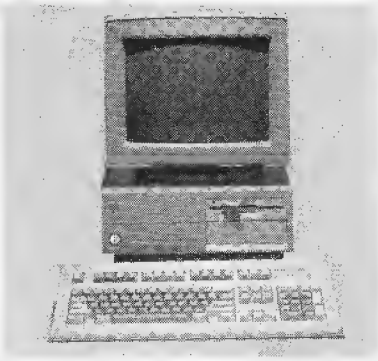
Commodore PC Colt

The quality PC-XT equivalent, ready to start work with colour or mono capability.



Commodore PC 10 III

The small footprint of this PC will save your desk space, it's also expandable – definitely a high performance XT.



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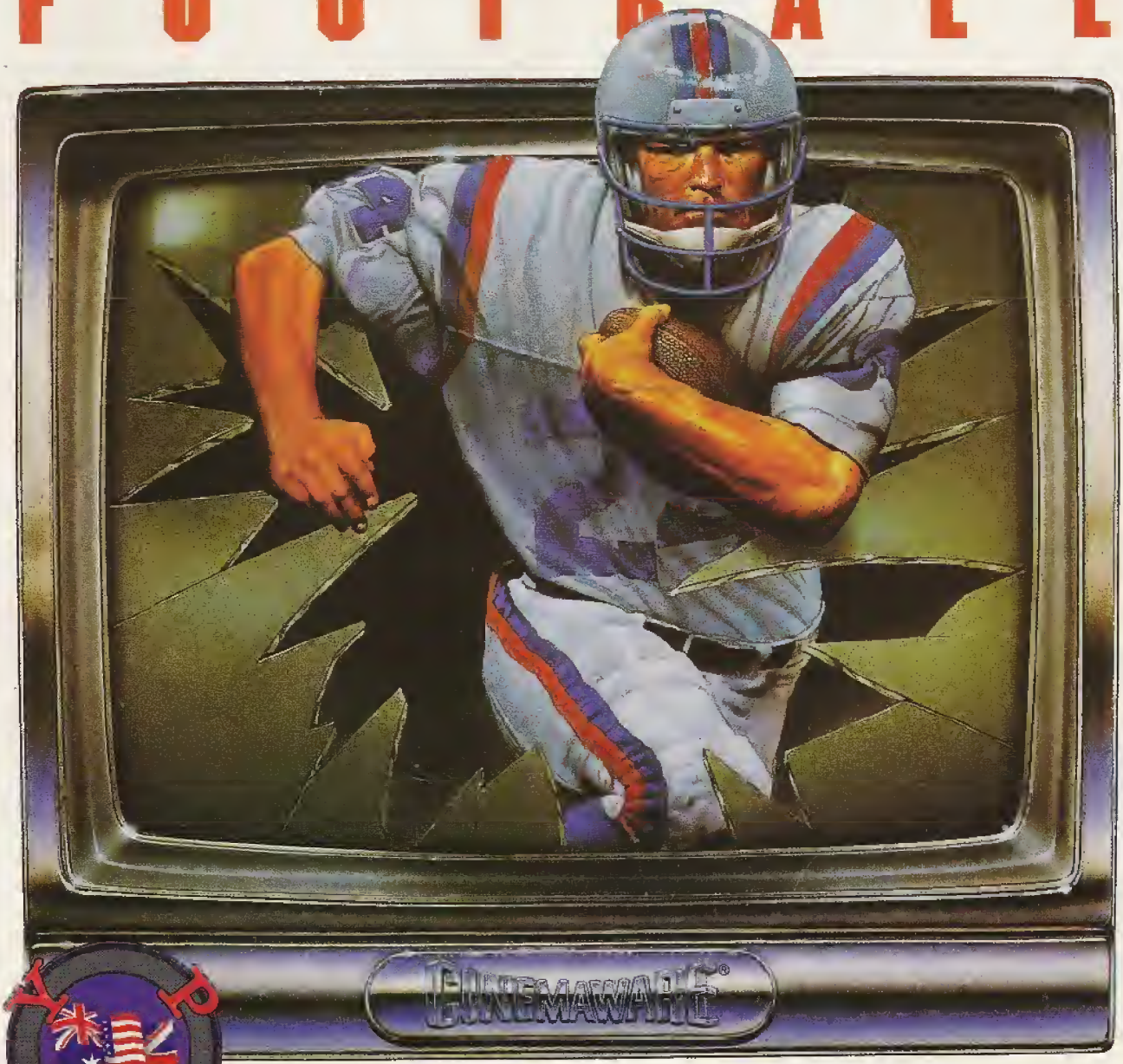

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VOL. 6 NO. 7 July 1989

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Editorial

At a recent press gathering, organised by The Others, Commodore's PR people, I lamented the lack of truly professional Amiga software. Fortunately for me the other reptiles of the press enjoying the chicken salad were not the sort that rush back to the office and do a front page story on any negative Commodore hearsay they can lay hands on.

There are plenty of full-blown packages for desktop video, animation, music, graphic design and the like. But, there is still a dramatic shortage of serious wordprocessors, database and spreadsheet packages.

Tony Cuffe, ex-Commodore product manager, eventually agreed. Bobby Kotick of the Disk Company (*Kindwords*, *Critics Choice* and more recently *Publishers Choice*), assured me the programs I have been waiting for are in the pipeline. I hope so, Bobby. Indeed, after last month's Amiga Notepad, which was crammed with information regarding the expected releases of several new word processors, the future looks bright.

After Phil Campbell filed his review of *Professional Data Retrieve*, I installed the package on my hard drive. Unlike *Superbase Professional*, which demands a dongle - the loss of which is a fate worse than death-PDR is unprotected. Like Phil, I quickly got the program up and running. After several hours tinkering I even took to writing a program or two. The documentation is lacking somewhat in this area, so we are considering a regular column.

Nevertheless, I must say that there is now a good database for mid-complex applications. I wouldn't suggest writing a full accounts package with PDR, but I may yet try just for the challenge. PDR is now booted every morning at our office. All my phone numbers and contact names have been recorded for instant retrieval. The entire program is fast, intuitive and friendly.

Good software is on the way. I hope a few more are as well designed as *Professional Data Retrieve*.

Andrew Farrell

Nearly One Million Amiga computers have been sold worldwide.

As an exciting component in a child's education, Amiga is a sound investment.

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In fact, the Amiga 500 and the Amiga 2000 are two of the most advanced educational computers available.

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C64ers...

GEOS Special

● This is a special for *Geos 64* buyers. Here's the deal:- *Geos V1.3* with five application packages for what *Geos* and one application would normally cost. With *Geos V1.3* you get *Desk Pack 1, Font Pack 1, Geowrite (Writers's Workshop), GeoDex* and *GeoSpell*. It's apparently on for a limited time and costs $149 for the lot! If you'd hesitated about going in for Geos, now would be a very good time to make your mind up. *Geos Special Pack* RRP $149 from ComputerMate Products (02) 457 8118.

Super Snapshot back

● If you're into grabbing graphics, and making slide shows, an update of one of our old favourites is about to return to availability. The Super Snapshot cartridge has under gone some major improvements since we last saw it. A local distributor expects stocks in a few weeks, along with a number of other new products from the same company.

Hot C64 Grand Prix Game

● Accolade are following up the success of *Test Drive* with a new game called *Grand Prix Circuit*. This first person simulation gives a perspective view of the track and other cars on eight circuits against nine international competitors. There are five levels of play. Watch for a full review soon as we get our hands on a copy!

Swap a CIA to fix problems!

● If you have experienced keyboard or disk drive problems of an intermittent nature - the type where one or the other decides not to work at all - an easy fix may be in sight. Two chips at the left rear of your C64 are identical. These may be swapped, and nine times out of ten, this will fix your problem! Both the CIA chips are socketed on older models.

360K RAM Expander

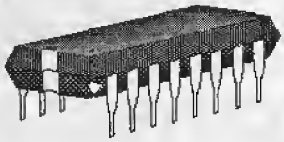
Great news for C64 owners from Grant Burton via Microtex 666: The 360K RAM expander is now available from the SWC on node 2208.

New C64 games from Questor

Star Trek - the Rebel Universe is now available for C64, RRP $29.95 for disk and $24.95 for cassette. Hurtling towareds the USS Enterprise are squadrons of Klingons. Use your main phaser banks and deadly photon torpedoes to defend the Enterprise against the first of many attacks. Vector graphic battle displays protray the fight.

World Karete Championship retails for $29.95. Fight your way through the intense World Karate Championship circuit. Trade blows on the searing sands of the Sahara or on the dark and mean New York streets. Compete against a friend or the computer. From Questor (02) 662 7944.

RAM Rumbles



New hi-tech plant for Europe

Commodore International's West German subsidiary, Commodore Buromaschinen gmbH, Will replace its current manufacturing plant in Braunschweig, West Germany, with a modern facility designed to increase the company's manufacturing efficiency and flexibility. The new facility, which will also be located in Braunschweig, is scheduled for completion in 1990.

Irving Gould, Chairman and CEO, stated, "Construction of this new, state-of-the-art facility represents an important strategic step for Commodore, as it expands our manufacturing capabilities in Germany, our largest national market. The increased production capacity will help to support our future growth objectives in Europe, and further solidify Commodore's strong position in the personal computer marketplace."

Vichips User Group

An addition to our user group listing. The Vichips group meet every Tuesday at the Malibu School, Rockingham. They cater for C64, Amiga and IBM users. The doors are open to all models of computers and Vichips are eager to hear from interested people. They provide a monthly newsletter, basic lessons and workshops. Write to the Secretary,
P.O. Box 540,
Rockingham WA 6168
Phone: (09) 527 9333

Mermaid Users Group

On the move, the Mermaid Commodore Group has relocated its meeting room and is now situated at Broadbeach State School, Room j #46, Mary Avenue, Broadbeach, Gold Coast. Meetings are held every Thursday evening beginning at 7.15 p.m.

The fifth anniversary of the group will be in July this year and they now have an active membership which continues to work to assist those who use their machines primarily in business. The number at meetings stands at about 35 and the older members benefit quite a bit from the younger ones who are keen workers with the various aspects of the Amiga, particularly programming.

The group began as a C64 only organisation but now serves the C64, A500, A1000 and A2000 workers. They are currently looking into the video aspect of the Amiga's capability with quite some success.

Sticky Labels

A great new range of tractor feed sticky labels is out for all those jobs we always wished we had labels for. There's labels to suit 5.25" & 3.5" disks, audio and video cassettes, "Ship to ..." labels, and Price Marker labels. A very useful range which will certainly come in handy at our office and no doubt shop owners will love the Price Marker ones. No other details as yet, but by the time you read this they should be in stock and price details will be available from Computermate Products (02) 457 8118.

Banner Band

This is one of those ideas that's so good you wonder why no one has done it before. Very simply, it's special paper to use with *Print Shop*, *PrintMaster*, or any other printing program that you'd use to print those long banners and signs etc. It's a 45" (nearly 14 metres) roll of tractor feed paper with "peel off" edges. but no cross perforations at all. This means that you can use any length to suit the print you're doing. I liked the idea of doing spreadsheet printouts on it, no more

Update

Firstly, let me apologise. In my last update I mentioned that we were getting "GARFIELD". Unfortunately I did not realise what type of company I was trying to deal with, but suffice it to say,we will not be handling any of their products. When I think of all the other products new and old, now totalling over seven hundred (700) then I am not overly concerned about not having the Softek/Edge range of products.

Since I last spoke to you we have some new books including "ADVANCED C FOR BEGINNERS" which would certainly give us the widest range of Amiga books.

Among new software products I am quite excited about the following:

For the PC COMPATIBLES we are now able to offer a brilliant new "MAILSHOT" program which is totally WYSIWYG and undoubtedly the definitive label printing program. Probably the most helpful program I have seen is PC - DAY BY DAY. It would take me too long to mention all of its features but together with a full calender/diary/planner and many other features it automatically reminds you of urgent or overdue appointments/ events.

For the AMIGA we have the same two (2) programs "MAILSHOT PLUS" and "DAY BY DAY" and an amazingly flexible but simple to use "HOME ACCOUNTS" program. This is fully menu driven and easy to use.

For those of you who are already on our up-date list a full new price list with many, many new programs will shortly crash into your letterbox.

AMIGA OWNERS

If we had a handy scanner, 200-400 dpi, 64mm width with graphics and OCR software at $995.00 RRP would you be interested? If so please ring Max on our Hot-Line number 407 0263 B.H.

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Advertisment

sticky taping sheets together, and we were able to do some giant graphics and calendars too.

The paper suits the normal 10" printer and comes in a nice range of colours blue, gold green, pink, white, yellow and in addition to the plain paper you can get four different styles for special occasions. This has wording printed down the side borders. There's birthday, congratulations, party and Christmas. It comes in its own dispenser which just sits behind the printer to feed the paper straight in. The outer cover slips back on after you've done the job, to keep the paper clean and ready for the next job. I thought this was a neat idea and have already found a number of uses for it.

RRP $19.95 per roll. Distributed by Computermate Products (02) 457 8118.

Amiga Pure Color

Pure Color is for Amiga graphics freaks. It shows how all the colours of a particular graphic will look when printed out with your colour printer. *Pure Color* handles the entire Amiga colour spectrum and we believe there's an adjustment method built in so that you can change the picture's colours if you don't like the way they're going to look when printed out. This sounds like a great idea and there has to be a saving on colour ribbons, not to mention wear and tear on your printer. The package was produced by American Amiga artists for kindred spirits. RRP $39.95 distributed by Computermate Products (02) 457 8118.

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From the editors of the Australian Amiga Review

Amiga-Live! issue three.

Three disks of hand picked public domain software, graphics and demonstrations.
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We increased the floppy disk access speed by a factor of **400%**.
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Contents Of Issue Three - ***NEW FORMAT***

Bally(AR) - Blackbox(S) - Pacman(AR) - Castle(GAD) - World(AD)
Graphics(AT) - Vacbench(H) Plot(Ed) - AMC(UT) - Tunnel(AT) - Pz15(S)
Tetrix(S/AR) - Blitlab(UT) - FracGen(AT) - BootIntro(UT) - Diet Aid(PR)
Mouse Util(UT) - Atari-Emulator(H) - Furnish(PR) Mackie(UT)
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Notepad

Tips on using Excellence!

If you're inserting text in the middle of a document and need fast response time, try the following macro key:

{menu format, insert page break}{left}

Assign this to the F10 key. It places a page break at the insertion point and moves the insertion point token. Your are then in effect typing at the end of a page. *Excellence!* has no problem with reformatting the document quickly. When you're done inserting the text, press Del to remove the page break marker. This is only useful when inserting several sentences or paragraphs. For just a few words it's faster to just type in the text.

When *Excellence!* indexes a word it looks for a specific pattern of characters. If you index the word "The" it finds "there", "therefore", etc. To help with a "full word" match, force a space between the first or second index marker and the word.

HP DeskJet, InkJet and PaintJet owners have had difficulties configuring their printers to work correctly with *Excellence!* in Draft and NLQ modes. A DeskJet user reported the following: If you set DIP switches A-8, B-1 and B-2 to ON and all others OFF, you can use *Excellence!* with its default Page Setup. This means no further changes to system preferences for the number of lines per page. This is known to work with the DeskJet. I don't know whether this applies to the InkJet or PaintJet.

With PostScript printers becoming more common there have been requests formore PostScript font support. If you own *Excellence!* 1.14 you can copy metric files to your Extras disk and use these. The Pitch setting through Page Setup must become 9 and you must set the scaling option to 72. This is done by adding an S=72 tool type to the *Excellence!* application icon or using the -s72 switch from CLI.

In addition MSS now have a metric file conversion utility to make available the *Professional Page* fonts. These fonts do not look as nice as the Adobe fonts, but they do offer you a greater selection. The scaling tool type should be set to S=78 or S=80. In the file area on the MSS BBS in the USA you can download the EXMETRIC.ARC file. This includes the metric conversion utility, an execute file which automates the process and a Readme-1st.doc to provide additional information.

If you don't have this version of *Excellence!*, then contact MSS for a return authorization number. The cost to upgrade to version 1.14 is US$9.95.

Commodore shuffles!

No doubt you read the message from the new MD of Commodore Australia back in our May issue. Well, the winds of change have swept wide and far. Quite a number of other Commodore personnel have moved on. So who can we get reliable product information from?

We should let you in on the fact that over the past year, a new PR company has been looking after Commodore. They are called The Others. We think they're doing a top job, and all things being equal, we should continue to see a steady flow of information on new products from them. Peter Ward also supplies a column from the USA from time to time.

Platinum Works!

MSS's integrated wordprocessor, spreadsheet, database, telecommunications and sideways print utility.

Based on their popular stand-alone productivity programs for the Amiga, these modules have been enhanced and reorganized to have the look and feel a truly integrated program should. *Platinum Works!* permits windows in either 2, 4 or 8 colors. Horizontal and Vertical overscan is also supported.

- **Wordprocessor:** 104,000 word dictionary, 470,000 word thesaurus, with definitions, spell-as-you-type, print graphics with text, fast scrolling and text entry, up to 4 documents open simultaneously, mail merge, built-in printer font support.
- **Spreadsheet:** 256 columns x 8096 rows, 68881 math co-processor support, 8 graph models, up to 4 graphs visible at once, print graphs or save them as IFF, macro language, compatibility with Lotus version 1 worksheets, 44 built-in math functions.
- **Database:** flat file database, 128 fields per database, records sizes up to 4048 bytes, 4.2 billion records per database, *dBase III* file compatible, customizable forms for data entry and reports, add your own formulas.
- **Telecommunications:** VT-100, 102, 52, ANSI-BBS, Tektronix 4010 and TTY emulations 10 file transfer protocols which include: Kermit, Xmodem, WXmodem, Ymodem, Zmodem and Sadie (simultaneous file transfer/chat), auto-chopping during file transfers, hardware and Software flow control, 8 translation tables, 8k review buffer, script language with two learn modes, 40 Phone Book entries per terminal file, up to 20 macro keys for each Phone Book entry, baud rates from 300-19.2k.

All modules are clipboard compatible to make the exchange of information from one module to another effortless. Available in Australia now. US$295.00.

DeluxePaint

Make certain that when buying *DeluxePaint III* from Electronics Arts you buy version 3.14 (the PAL version) and not the US version. Otherwise you'll find that the program has a tendency to crash at critical times due to memory management problems. The PAL version of *DeluxePaint III*, distributed in Australia and NZ by ECP Pty Ltd, has a gold sticker on the outside of the box. The gold stickered boxt version 3.14 is inside. The NTSC version of the program sometimes has a white sticker

on the outside that says "PAL version". The NTSC version of the program is version 3.01.

Any owner of *DeluxePaint II* for the Amiga can upgrade to *DeluxePaint III* PAL through ECP Pty Ltd. Just send in your original manual from *DeluxePaint II* and a cheque or postal money order for $84.00 ($80 for the upgrade and $4 postage and handling). If you are in New Zealand, the cost is A$88.00 (A$80.00 for the upgrade and A$8 postage and handling).

In exchange customers will receive a completely new *DeluxePaint III* package. Send your manual covers and the required amount of money to: ECP Pty Ltd, Deluxe Upgrades, 4/18 Lawrence Drive, Nerang, Qld 4211.

Downloading from BBS's

Some users have had loads of problems trying to download files from Bulletin Board Systems. There are a few little tricks to watch for. Not all files are ready to run, and some protocols on trashy terminal programs tend to mess up files just enough that they won't run.

For example, if you download with Xmodem, and don't use the Chop option (if your terminal has it), Xmodem pads the end of the file to come out to a multiple of 128. These additional bytes change the appearance of the file to the Amiga.

If you can get hold of a utility called Dutils, there is an option that will clean up these files. Alternatively, load the file into a text editor that will display control characters. Go to the end of the file. If you see a group of control Z's at the end, delete them. You should then have a working file. Some files have been compacted using a special utility. You can spot these by the .ZOO or .ARC extension. These files need to be decompressed before they will work. You'll have to track down the appropriate utility by the same name as the extension. For Zoo, you would type:

ZOO -extract zoofile.zoo

(Or, if you've downloaded BOOZ, just type "Booz Zoofile.zoo")

For ARC files just type ARC -x filename.

Programmers WANTED

If you feel like an experienced Amiga programmer, with an urge to travel to the U.S.A, Micro Systems Software are looking for people like you. According to Steve - he's the guy on the back of the box - M.S.S. has big plans for productivity software in the future. They're looking for talented people to help realize that dream.

If you are interested in developing high-end productivity software and are experienced in Lattice C and the Commodore Amiga, call or write us to:

Micro-Systems Software, Inc.
12798 Forest Hill Blvd.
Suite 202
West Palm Beach FL 33414
407/790-0770

Macintosh emulation

Ideas on our recent news item covering the ReadySoft Mac emulator have flooded BBS's around Australia - not to mention some further tid bits of information about the device. The basic feeling is that anything that expands the Amiga's capabilities must be good. The Amiga drives can handle Mac and IBM format disks if the drivers are correctly defined!

The Max emulator by ReadySoft (who wrote *Dragon's Lair*) does not need a Mac drive. You can even read the first couple of hundred K of a Mac disk (you can write stuff in such a way that both Macs and Amigas can read it). One possible use for university students would be to transfer Postscript files to available Mac laser facilities commonplace in many institutions.

Elmhurst BBS racism

Here's an amazing bit of info from the international Amiga echo system. A recent alleged scandal is starting to surface involving an Elmhurst BBS in which several users discovered a Nazi sub-board distributing racist propaganda for the Aryan Nation.

The last we heard legal action was being taken but now someone else told us that the charges might be dropped. Anybody know the full story?

BBS programs

People are asking about BBS programs. Well, there is still only one that rules supreme - it is available Down Under, although you will have to wait 4-6 weeks for delivery.

The program is *BBS-PC* from MSS (the people who do *Scribble!*). It has everything except multi-user capability. It only supports one phone line at a time. There are some other packages but this was the first and it is still the best. The strongest feature is the programmability of menus. You can give your system a unique look and feel with a bit of extra work.

GVP Accelerator

Early previews and write-ups are starting to appear for a hot new accelerator board for A2000 users. The GVP Accelerator looks very impressive. The 68030 25 mhz board actually runs at this 25 mhz - some other so-called speed-up boards don't.

GVP runs at an Asynchronous clock rate while all of these other 68020/30 boards simply double the native 7.14 Amiga rate. One article compared a four meg (32-bit) 68030 Amiga 2000 to various workstations: Sun(US$19,000-41,000) and the Compaq 20 mzh 386(US$21,000). The Amiga outfitted with this board is faster than all of them except the Sun that cost $41,000.

The article states that if you add a couple of dollar crystal chip the Amiga could actually run as fast as the Sun 3/470 (11,000 DRYHSTONES). Why wait for the A3000 when you can plug one of these babies in? The above Amiga 2000 with the 4 megs (5 total) costs around US$5200. That's not bad when you compare it to what machines it can out run.

The only problem with changing the clock rate is that it's not real reliable. Chips start heating up! Maybe when they get faster RAM it will work more reliably.

Portable Amiga?

Reports of a portable Amiga are unfounded. They are based on a prototype home built system thrown together in a wooden case and demonstrated at a recent US computer show. Another prototype system that was transportable in a more serious form was presented by a third party company.

The machine was called the Journeyman and consisted of a pop-up 7-inch amber monitor, 1 meg of RAM, an RGB port, two drives, a 3.5-inch hard drive bay, and a 150-watt power supply. By no means a

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laptop, but quite portable.

NASA using Amiga's!

NASA is the current major user of Amigas in the USA government. The space agency uses Amigas for computer-aided design, solid modeling, simulation, graphics design

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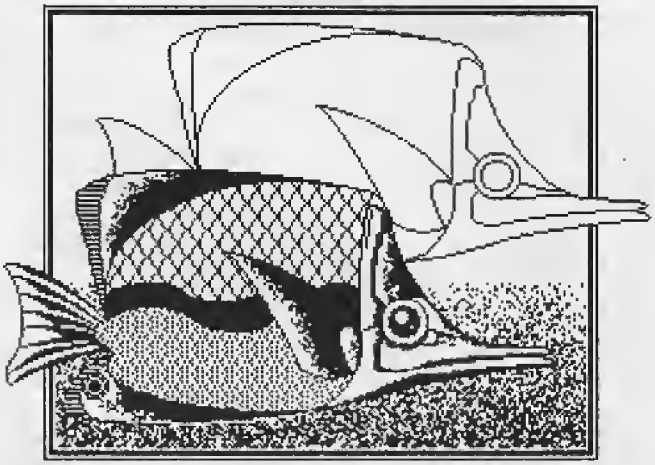

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Carrier Command Tips

On the Walrus 'equip' screen, you should be able to click on the arrows below the ACCB and get the different types available. Same would apply for other items. Another tip, as your number of resource and factory islands increase, be sure to up your manufacturing quotas. For example, your carrier can handle as many as 64 of the Manta missiles.

By the time you have around 34 islands, with about 23 being resource/factory types, you should be able to take all the manufacturing quotas to the max the carrier can handle, and always find an adequate resupply.

Another tip: Equip a Manta with a long range Comm Pod (and wing missiles if you can spare them), fly it to an island you have just taken over, and land it on the runway, and leave it. You can go usually as far as one island away, sometimes two, without losing contact, and the island you leave the Manta on appears invulnerable to attack.

If you run into a situation where as soon as you leave an island, it comes under attack and is retaken, then you back and retake it and the same thing happens again - this seems to be a sure cure.

When you get to the 'star' of islands, it is easy to hop the Manta from island to island behind you. (Unfortunately, you can only protect one island at a time this way - only one long-range equipped Manta can be handled at one time, unlike those not equipped. You could have all four in the air.

Another interesting thing you can do in *Carrier Command* is to send BOTH a Mantra and Walrus to a distant island. Just equip the Mantra with a long range communication pod, and fly it along with the Walrus on automatic to an island. Don't let the Manta get too far away from the Walrus.

and desktop publishing, among other applications.

Wordperfect future?

A recent storm in a tea-cup has proved some big companies do care about the needs of end users. News that the Wordperfect Corporation had withdrawn future development plans hit the streets with this message from Pete Peterson, a member of WordPerfect's Board of Directors:-

"I spent some time on the phone today with an Amiga user who wanted to tell me how upset he was to learn that we have cancelled *PlanPerfect* for the Amiga and put on hold any plans for a major revision to *WordPerfect*. The person was especially upset to learn that the decision was based largely on monetary considerations. All of this is true.

"This week we took five programmers from the Amiga group and moved them to OS/2 or Unix. That left two programmers to maintain (fix the bugs) in the current versions of *WordPerfect* and *Library*. We will continue to sell these versions, and we will from time to time issue minor releases to fix bugs. For those of you who know:

"1: We do not show fonts on screen. 2: We do not support any graphics on screen or in a document. 3: Our price is too high for the market. 4: Some people feel our software has too many bugs.

"4 is, of course, something we can do something about (and there is an interim release coming in a couple of weeks). 1, 2 and 3 are tougher. We don't have an easy way of getting fonts and graphics on screen.

"Version 5.0 for the PC handles fonts and graphics well, but not on screen. We probably won't have a WYSIWYG DOS version that can be ported for another year, and a port of a DOS version would take 18 months after that. The Amiga programmers had been planning on porting the next Mac version, but the big problem with using the Mac code (which is 68000 assembly) is that we rely completely on the Macintosh facilities for printing.

"That means the Amiga group would have to write all the printing code themselves, in addition to the code translation. Such a product could not be ready until mid-1990 at the earliest - and probably longer. We thought of using our printing code from the C (Unix) version, but the code is just too big to be used effectiely on the Amiga. The third alternative is to write a word processor from scratch."

After that message appeared on BBS's, a flood of complaints hit the WordPerfect Corporation. Messages flashed to and fro from people arguing the pro's and cons of this decision. Some mistook it as a complete step out of the Amiga market by WordPrfect - thinking that existing software would receive no further support. However, there is clearly a new release of *WP 4.1* which will be available to registered owners shortly. Version 4.1 will continue to be sold, supported, and upgraded, regardless of the fact that they have stopped development plans of 6.0 and *PlanPerfect* and other Amiga products.

Or so the story went. Later the same week, WordPerfect leaked word that development of version six was probable, although all Atari development had ceased for sure. *WordPerfect* for the Amiga started with very brisk sales initially (they paid back development costs in 34 days), new sales slumped.

We may see further development as the Amiga business market matures. Basically, WPC's top dogs pulled the plug on Amiga support, possibly because they confused us with the ST people. Not enough money in the Amiga market compared to the others? Well, a company has a responsibility to maximize their return on investment. But such projections tend to be self-fulfilling prophecies. A little risk money can often pay off in a big way. Microsoft came out with *Excel* for the Mac at a time when it was an anemic toy not taken seriously by the business world - very little market potential at the time. I doubt they regretted being first.

WordPerfect have made some mistakes. The buggy version Australia first saw is one bad example. *WP Library* is another mistake. The applications are for the most part pretty good. But there are a ton of calculators, notepads, etc in the public domain.

WP cannot simply rely on their name to carry them to the top of the charts. They must be able to produce products that can reasonably compete with other similar products on the market. They also should check the market to see if a product is really needed.

More news next month.

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LETTERS

We invite letters on any topic related to Commodore computing. We cannot promise to answer, but we can promise that the most interesting letters will be published in these pages. Contributions may be edited for brevity or clarity.

Commodore gripes

We get lots of letter from people complaining about Commodore service. They will be the first to admit it needs improving. Let's hope the new management have some plan in mind. Anyhow - here's a letter from someone who had success with service! - AF

Our Amiga 1010 broke down and would have cost $200 to repair. What happened? Commodore replaced it free of charge!

Your review of *Interceptor* was true and well done. I must commend you on your *StarGlider II* and *Dragon's Lair* review. *Battle Chess* was very good also. I think you have great taste in games. Your mag is cheap too! Any overseas mag is usually $4-$5. Look at *Amiga World* - $9.20 - I don't buy it. Not enough game reviews and too expensive. Anyway, your magazine is great value for money.

Graeme Smyth
Cobundra

It's true, we can't do a thing wrong! - AF

Double Dragon C64 version is YUK!

After seeing your review of the game *Double Dragon* in the April edition ... I decided to take the plunge and buy it. Before this though, my friend who owned the game suggested I see his first to make sure I really wanted it.

I was appalled at the quality of his C64 version and was glad I had not bought it. The graphics, for one thing, were slack to say the least. At certain times during the game, characters were seemingly split in two! At other times only half the character could be seen ...

In my opinion, a game that expensive should be worth the money that was paid for it. The IBM version is tenfold better. It seems the company in question didn't take too much care in the development of the game for the C64.

Mark Healy
Ipswich

It's pathetic to see the slack attempts that have been made on some games when transferring them to new machines. C64ers expect better than this. The Amiga version was well produced. What happened? - AF.

Up to Amiga - but which software?

I am contemplating the purchase of an Amiga 500. I have been the owner of a C128D, with a Star NX1000C printer, which unfortunately is only suited to the C64 and C128.

I have many questions and worries about the Amiga 500, and related software. I don't wish to make a costly mistake. Recently I read an article on *Kindwords 2.0*. Is this program a desktop publisher or just a wordprocessor? Which DTP program do you recommend, which printer and what wordprocessor? What about databases? What is available for digitising music?

Nathan Blackwell
Wellington, SA

Wow! What a barrage of questions in one letter. We think you should grab a copy of the Amiga Annual and read it thoroughly to answer some of your more indepth questions. Software is a matter than is influenced to some degree by personal choice and your budget.

For desktop publishing, you really need a laser printer. If you want to stick to dot matrix publishing we recommend PageStream. Otherwise go for Professional Page or PageSetter.

Word processors are tricky. There are dozens, all different, all with many extra features. And there are many new ones about to be released. Wordperfect is good for mass text crunching - but no graphics or interesting fonts. Kindwords - yes, it is just a wordprocessor, is powerful, good value, but only works with its own fonts. Excellence overcomes this, but is somewhat slow and more expensive. So there is no clear choice at the moment.

For graphics, grab Deluxe Paint. Simple animation starts at Fantavision - then work your way up to Turbo Silver.

Digitisation is soon to be the topic of several articles in ACR so keep reading - there are many programs around - Audiomaster II is very good. Well, read the Amiga Annual, and go from there..

As for hardware - with printers you get what you pay for. Epson are good quality reliable machines. Fujitsu cost more and are better again. There are some cheap models around, but we reckon they're best avoided. - AF

C64er wants Pen Pal

Avid games player and Simon Basic expert, Shuan Turner, would like a Pen Pal. Write to:

Shuan Turner
R.M.B. 2260
Kalimna West Rd
Kalimna West
via Lakes Entrance
VIC 3909

Help! Mini Office II + 1250 Printer

I recently purchased Mini Office II and can operate every section of the program with the exception of graphs. Someone told me it is a simple matter of altering the dip switches in the printer. I have tried with no success. Could anybody help me?

R. Edwards
The Entrance

Presuming Mini Office II is set correctly, you should be able to get graphics. Ensure you have either a Commodore printer or Epson printer selected. Depending which, change dip switch 3 (see page D-2 in your manual). Then make sure switch 1 is set to the interface you have. You may also have to adjust switch two. Try combinations of these until you get the right results. Start with:-

1 off
2 on
3 on
4 off
5 off
6 off
7 off
8 off

Choose an Epson printer from Mini Office II. Page D-3 explains all the dip switches in detail, and the following pages have many examples of settings for different printer emulations. I suggest you study these carefully - AF.

TWS Address & C64 Coverage

In reply to G.C. Gray's letter for help regarding *The Write Stuff* in your MAY issue, I think he will get some result from the following address, which was alive in September 1988:-

SACCUG Inc.
P.O Box 427
North Adelaide
S A 5006

I, like other selfish C64ers, feel that this publication should stick to the C64/C128 format and initiate a totally new magazine for the ever encroaching Amiga.

I wonder if someone could possibly explain the rampant price differences asked for exactly the same item of computer hardware. The case in point is the Star NX1000 printer which I have priced from $390 all the way up to $500. Worse yet, the American price for the same machine is advertised at US$150! Surely the Aussie dollar is not that bad?

Peter Lyn
Narooma

We originally talked about two magazines, but it just is not possible. If you look at how many Amiga ads there are in this issue, you'll see what is paying the bills. Pull out the C64 articles and run them in their own magazine and you may find you don't have a magazine! Simple. One supports the other.

As for printer pricing, you're right, the OZ$ is not that bad. But if you add government tax, freight, a margin for the importer, another for the distributor/wholesaler and yet another for the retailer, you have the Australian price. The difference, like just about any other consumer item around, comes with varying buying powers and degrees of retailer greed. - AF

GEOS + MPS 1200 Problems

Using GEOS V2.0, I am having trouble after extensive trial and error with various drivers. We get a line feed every second line using the MPS 1200 driver, or in Epson mode. Can you offer any suggestions to give us full 80 column printout without the line feed?

Lester J. Gaudry
Computer Co-ordinator
Shorncliffe State School

The MPS 801-803 drivers that you tried only produce 60dpi. The MPS 1200/50 is capable of 80dpi. Stick to that driver. The dip switch settings should be:-

1 - na
2 - off
3 - off
4 - na
5 - na
6 - na
7 - na
8 - off

Hope this helps ... the settings are out of the GEOS printer handbook. Anyone else having printer problems with GEOS is welcome to enquire. - AF

System 2 -Virus

Recently after reading an article by you in the Amiga Annual 1989 headed "Virus Alert" I purchased an "Anti Virus Disk" on which resides the program called "System Z".

Having obtained a copy of Workbench V1.3 I decdided to install System Z onto the workbench 1.3 disk. On doing so and then viewing the boot block via the "View Boot" program on the Virus Pack Disk I found wording displayed on "Drive DF0, Cylinder 0, Sector 1, which confused me. I have attached same for your perusal.

Does this mean that this disk is infected with the "Anti Virus of Northstar", and if it is how do I get of it?

John R Gray
Loftus

Not at all. The text you can see is part of the System Z program which displays to the screen if a virus is detected. (Notice the next few lines mention clicking the left or right mouse button) -AF

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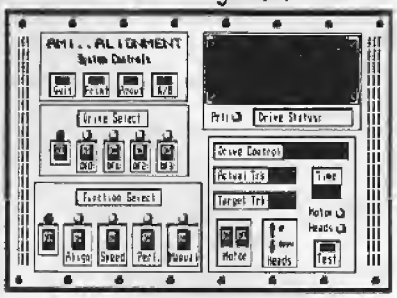

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BOMBUZAL

IT'S DYNAMITE!

by Eric Holroyd

I was talking the other day about what constituted my idea of a good computer game and when I booted this one up I knew pretty quickly that it was the kind of thing I'd been raving on about.

I do like good arcade-type games, shootups or maze-type games, which I can get into with very little reading up (everyone knows you should load any program before reading the instructions, don't they?) and then have some nice easy control method to quickly get accustomed to. Of course, graphics/sound and effects/music need to be nice and attractive, and (my own pet thing) the program should save your high scores for posterity and bragging about.

Bombuzal meets all my requirements and I love it! It has some of the top UK programmers in its credit line-up such as Tony Crowther, David Bishop, Jeff Minter, Jon Ritman etc and the great background music is credited as having been written with the Ultimate Sound Tracker, which as all Amiga PD freaks would know by now, is widely used in Europe by the hackers who make those weird and wonderful demos to do their music soundtracks.

Your alter ego is a pretty dumb-looking creature lumbering about the playfield, which is a series of tiles of varying composition. On some of these tiles are placed bombs of differing sizes which Dopey has to explode by stepping him on to them and pressing the firebutton. The tiles can be crumbly, slippery, or indestructible, whilst the bombs are of three strengths, each of which blows up a greater area around it.

When you press the firebutton you only have time to move one square away from the bomb you're detonating so there are some snap decisions to be made as to which bomb you go for, and where's the escape route?

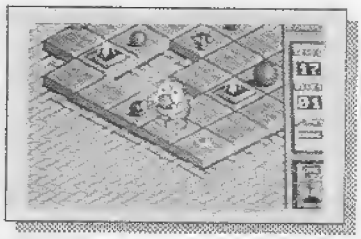
Some of the tiles are slotted and bombs may be moved along the slots to other slotted tiles. Bombs may be picked up from other types of tiles too, by moving onto it and pressing the fire button quickly. Once picked up, they may only be put down on a slotted tile. There are tiles which will dissolve when you move off them (tricky when it leaves you nowhere else to go!), and others are Rivetted Tiles which can't be destroyed at all. Then there's Ice Tiles which you'll slide off if you step on them. OK if the next tile is solid, but if it's another Ice one you'll keep going until you either land on a different tile or fall off the edge!

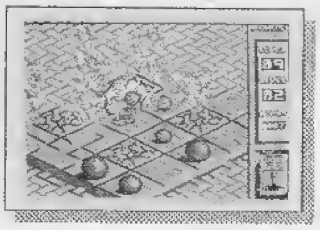
There are many other features such as Droids, Spinners, Switches, Sinisters and much more which you'll find out about as you play. This is another instance where I can get bogged down in trying to explain what really happens when really all you need to do is sit down in front of it (with a good joystick like my StarCursor) and play. Be wary though, the sun will be coming up before you know it and you'll have played the night through again.

When starting off the game you get a nice Demo of what happens and which tiles are which, then you get to choose: One or Two Players, 2D or 3D View (great option, this one!), New Game or Continue from the level of the last game. F1 toggles between View modes in actual game play and pressing Space shows a map of the current level during play (but doesn't stop the timer counting down!).

On completing a game you're given a password that lets you bypass the screens you've already conquered. What a great idea this is! Other games programmers should take note of this feature as I'm sure I'm not the only one who gets bored with a game if I have to complete all those lower levels to get back to where I got knocked out.

Full marks to Image Works for that feature alone. Talking about marks: it says on the packaging that *Zzap* Magazine gave the 64 version of this one 97% and said it was 'one of the cutest and most playable games on the Commodore 64'. I can't argue with that as I think it's one of the best Amiga games I've seen for some time. I recommend it highly to other arcade addicts. ❑





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Clicked on Games

SPACE HARRIER

by Eric Holroyd

This is another really great arcade conversion of a SEGA masterpiece, and although there's a plot of sorts outlined in the accompanying leaflet, it's really just a very good, satisfying shoot 'em up.

You're the Space Harrier (one of the most experienced astral exterminators in the galaxy, says the paperwork) and you'll be trying to destroy all comers with your laser blaster on a series of levels of increasing difficulty. At the end of each level you have to fight off the "final leader", a hideous giant of a creature, before being allowed to proceed to the next level. There are untold hordes of baddies, all pretty hideous come to think of it, and they come at you very fast so there's no time to hang about.

The play field is nicely drawn with multi-colored squares forming the ground, which scrolls very smoothly as you dart from side to side, and as your view of the action is from above and behind your "man" the angle from which you see the ground changes constantly as you move up and down too. I thought all that was quite brilliantly done and hats off to the writers for that one.

I've seen two versions of this game, a PAL version from UK and the American NTSC version, with the main differences being that the PAL one has a very broad English voice saying "Watch out!" The NTSC version has an American voice saying the same thing and I can't help wondering why they bothered.

Music and effects are similar in both versions (all great stuff!) and you get to save "Your Name in Lights" if you beat previous High Scores. As far as I can see, the main difference is the slightly longer (vertically) playfield in the PAL version but both play brilliantly so it doesn't really matter at all. The only reason I mention seeing the two versions is that nowhere in the paperwork for either does it say anything about how you choose joystick or mouse as your weapon.

It's easy, all you have to do is press the firebutton if you want to use joystick and the mouse button if you prefer to play with that as a control. I'm still a little undecided which method I like best as I found that fast diagonal movements were easier with the mouse but I liked the joystick better for blasting. What we are told is that we can adjust the "response" of joystick or mouse by using the + and - keys so you can make your weapon as fast as you like.

Levels five and twelve are bonus stages and you get to ride on the back of the friendly dragon, Euria (be careful you don't fall in a Heep! A little Dickensian joke there!) and through his magic you'll be able to destroy everything on land just by touching it. All get you extra points so be sure and get as much as you can on these two screens. Spacebar pauses the game and ESC gets you out of it to start again, so everything seems to have been taken care of.

This is a very good, very fast arcade shoot up and I liked it a lot. Highly recommended. ❑

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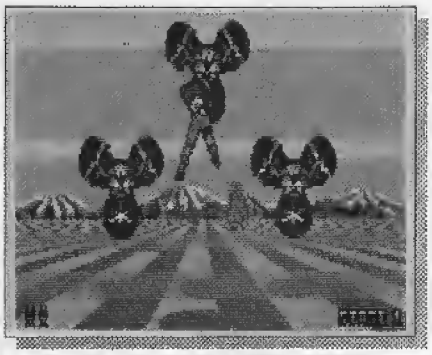

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crazy CARS II

by Andrew Farrell

Now this is what *Crazy Cars* one should have been like. This is no *Super Hang-On*, or *OutRun* for that matter. *Crazy Cars* handles like a real car in many respects. The usual behind the car view is given. The road scrolling by is smoother than *Test Drive* or *OutRun*. The scenery is repetitive but interesting.

What makes *Crazy Cars II* worthwhile is the plot. You must cross four U.S. states in search of corrupt police involved in a car stealing racket. Your progress is hampered by the real police, who are not impressed by your lack of interest in speed limits or road safety.

To complete your mission you will need to refer to the pop up map, which shows in detail the actual highways that exist in real life that you will be travelling on. Your radar detector/police finder/direction indicator will recommend the best route. Driving the car is done via a joystick which acts like a paddle. As you press in one direction, a steering wheel on the lower left of the screen turns, giving you degrees of attack on those sharper corners.

A light touch is needed once you hit top speed in your Ferrari. I found it was almost impossible to travel for long flat chat - I kept collecting the telegraph poles which straddle the roadside. Somewhat unrealistically my Ferrari disappeared in a ball of flames every time. *OutRun's* multiple rolls were better. Of course, you can't beat *Super Hang-On's* flip-the-driver-out-of-the-seat routine.

Crazy Cars held my attention for about one hour. I had to keep rebooting on the A2000 I was testing it on - some problem with the keyboard driver, I suspect - very annoying.

If you're totally into car racing games, this is worth checking out. It's not super fast. There is a good combination of precision driving and high speed dodging. Graphics, animation and game play are excellent in all respects. ❑

Our review copy came from Questor (02) 662 7944. RRP $69.95 Amiga.

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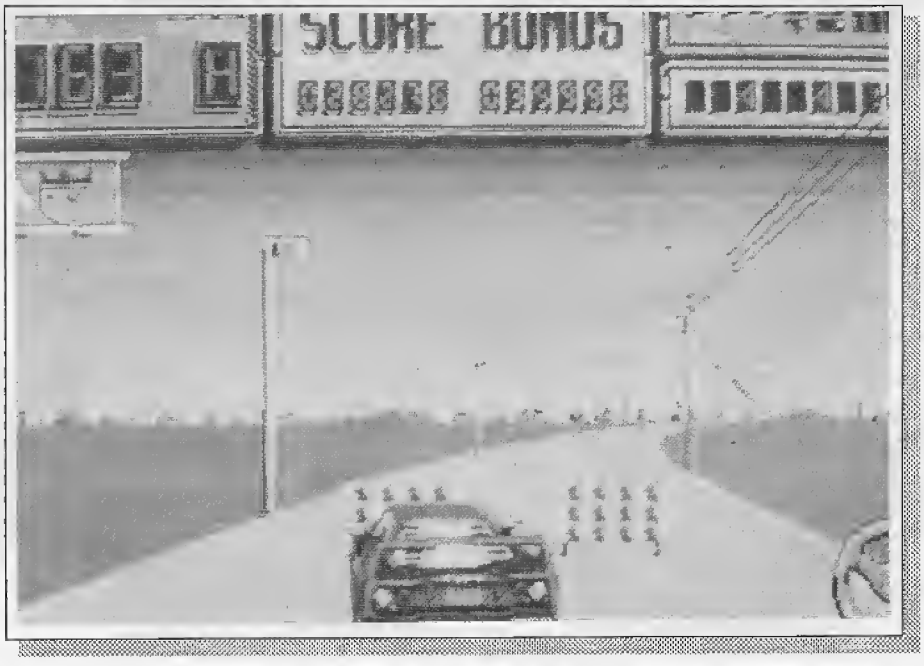


Mercenary Compendium

by Andrew Farrell

Flight simulator-cum-adventure fans will love this game. It was big on the C64. It should be bigger on the Amiga - and it is! You get both adventures - Parts I and II - straight away.

Mercenary is a classic action adventure. The plot seems simple at first, but as you play the game, it gets more and more complex. You have crash landed on a planet. Your ship is in ruins, and you need to get off the planet. The problem is, you need a big ship with a lot of thrust, and you've landed in the middle of a civil war.

What you do next is up to you. *Mercenary* offers two worlds of exploration. The first is above ground. A whole city of towers, and buildings, not to mention a city in the sky - which is about the size of a large space station.

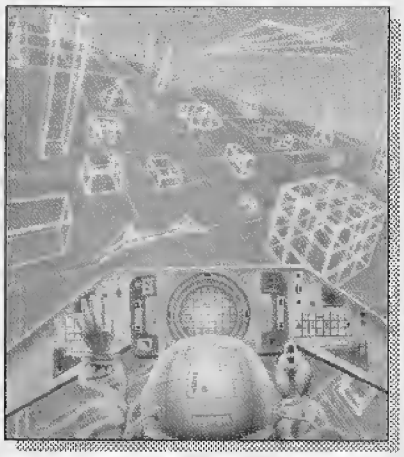
Below ground, you climb out of your ship, and walk around on foot through a mass of corridors, rooms, secret doors and transporters. Various objects can be collected - some by chance, some must be purchased.

The game is laced with a good smattering of humour. All sorts of odd messages flash up during unexpected events. *Mercenary* offers plenty of exploration for the seasoned adventurer.

Flight simulator fans will relish the smooth vector graphics. Take a dive under a Golden Gate bridge look-a-like, or fly around shooting up whatever takes your fancy.

This game must be mapped. Clues and a diary of events are worthwhile. If you really get stuck, ring the magazine and ask for the back issue with me on the cover in a space suit - I'm sure they'll be able to find it! We printed a full set of maps and clues for the C64 version. The layout, I am promised, is very much the same.

Recommended playing. An original game of classic proportions. ❑



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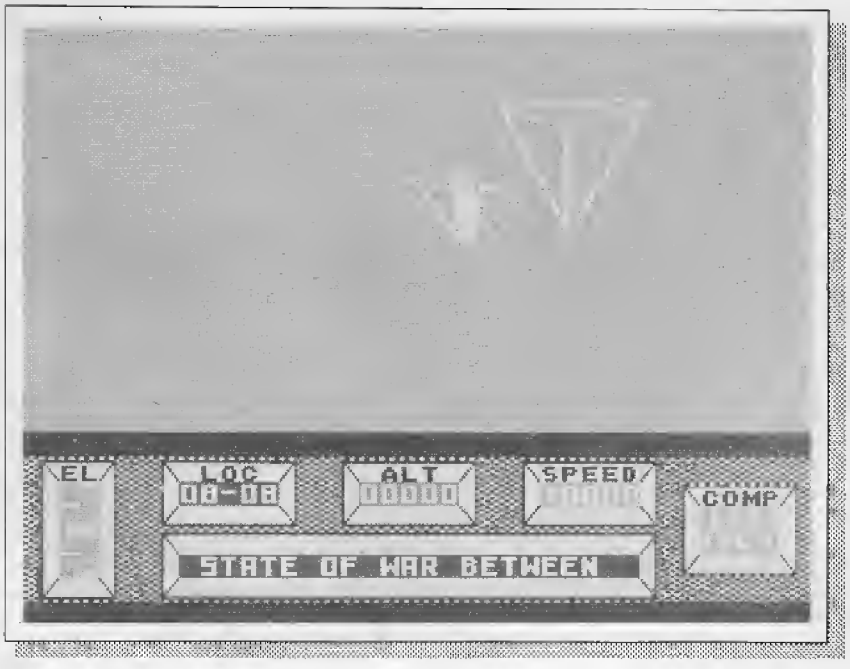

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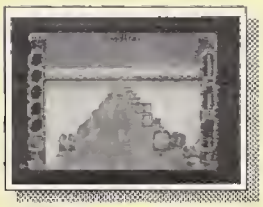

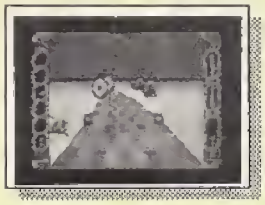

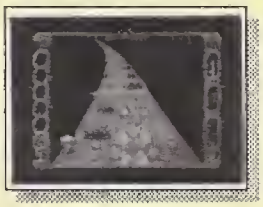

by Richard Silsby

Strap your helmet on. Ensure the anti-glare shield is in place. Check to make sure your seat belt is on tight. Prepare to take the jump into hyperspace, and take a look at the new game from the Hewson software laboratories. It will literally have you jumping out of your seat!

Eliminator has rocketed its way into our offices, and thrust its way into the hearts of all those who have caught a glimpse of it. I felt that it was such an all around good game that it would have to be pick of the month in the shoot 'em up department. What makes the game so good? Read on!

We begin our journey by observing our modest means of transport. It is the Eliminator Ground Effect High Speed Vehicle. That is just a complicated way of saying jet fighter, the likes of which we are unlikely to see in our lifetime. This machine travels along at a very great rate of knots.

Your EGEHSV can be fitted with all manner of intricate machinery to help it go faster, use less energy, and wield greater fire power. It sounds like something that would be useful for traveling through peak hour city traffic. Although you are not given a great range of gadgetry to begin with, these are added to your ship the further you go.

In your EGEHSV you travel along a winding track, which takes you, not to the Land of Oz at the end of the Yellow Brick Road, but to most of the planets in the universe, so as to rid the world of all destructive influences, except yourself of course.

It is this track that is so brilliantly devised. It scrolls toward you like a car game, complete with dips and hills. However, every so often it takes a major dive like you've hit the edge of a tennis ball. The immediate reaction of most players is to stand up in a vain bid to see over the suddenly shortened horizon. Once you get used to the realistic track conditions, there's more to contend with.

You can expect to see some ghastly mechanical monsters - ships appearing in front of your eyes in all shapes and forms. Also burning walls, jumps, and tunnels.

To add some interest to the road, the makers of *Eliminator* have made it possible for you to travel upside down. You do this by hitting a jump when you are traveling through a tunnel. This certainly does add more interest to playing the game. And don't think you will catch your breath while standing on your head, because some of the aliens may be attempting to catch their breath as well.

The view you receive is from behind the EGEHSV looking over its after burners, and through to the road ahead. Your vehicle follows the contour of the road, with starts as a dot in the centre of the screen and disappears as a wide thoroughfare underneath your winglets.

The graphics are of high detail, well arranged, great colours, and interesting shapes. The music is well arranged, and pleasant to listen to while playing. Sound effects are right in line with the action taking place.

Get your hands on the *Eliminator* before you find yourself eliminated! Recommended. ❑

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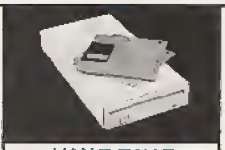

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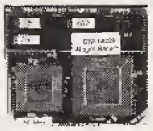

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FALCON

by Marco Ostini

Combat Flight Simulators have advanced in leaps and bounds over the last few years. Not so long ago *F/A-18 Interceptor* was regarded as the best combat simulator on the market, but now new standards of combat simulator brilliance have been achieved with the release of *Falcon*.

Falcon has existed on other computers, including the Apple Macintosh and IBM compatibles with a special EGA version, before an Amiga *Falcon* was released. The graphics and sound of the Amiga version are easily superior.

From the beginning of the program, the effort put into this simulator is evident, with a musical theme created using some of the copious amounts of digitized sound effects. Attention to detail didn't stop with sound effects, the interior of the cockpit very closely resembles the actual layout, and amount of instruments, within a real F-16.

There is a military flavour throughout the game. After entering your call sign you feel as though you have joined the USAF. It is possible to choose from one of five ranks of office starting from First Lieutenant, which is the lowest, and finishing with the highest rank of Colonel.

In the lowest rank a few exceptions to real life handling characteristics have been made to make it easier to learn how to fly the aircraft. For example, it is impossible to crash, to be damaged by enemy fire or to stall the aircraft, and you have at your disposal unlimited arms.

If you feel that you are Top Gun material then I suggest the rank of Major. In this rank the performance of the aircraft is true to life with all the nasties possible such as blackouts, redouts and stalls and all landings have to be on the airstrip only, (this isn't a Bad Harrier) wandering onto the grass is met with stiff penalties. The rank of Colonel is for fighter jocks only. In this rank the MiGs shoot straight and are skilful with their flares, and SAMs just can't wait to make you kiss the dust. The only enemy aircraft are MiG 21s which are merciless killers.

After selecting a rank you are then able to choose from 12 different missions. The missions can range from simple bombing runs, to full scale attack on enemy airstrips and bases while engaging multiple MiGs in air to air combat. After successfully completing a mission you are rewarded with a ribbon and merits added to your flight log book. There are also several authentic medals of honour for outstanding performances.

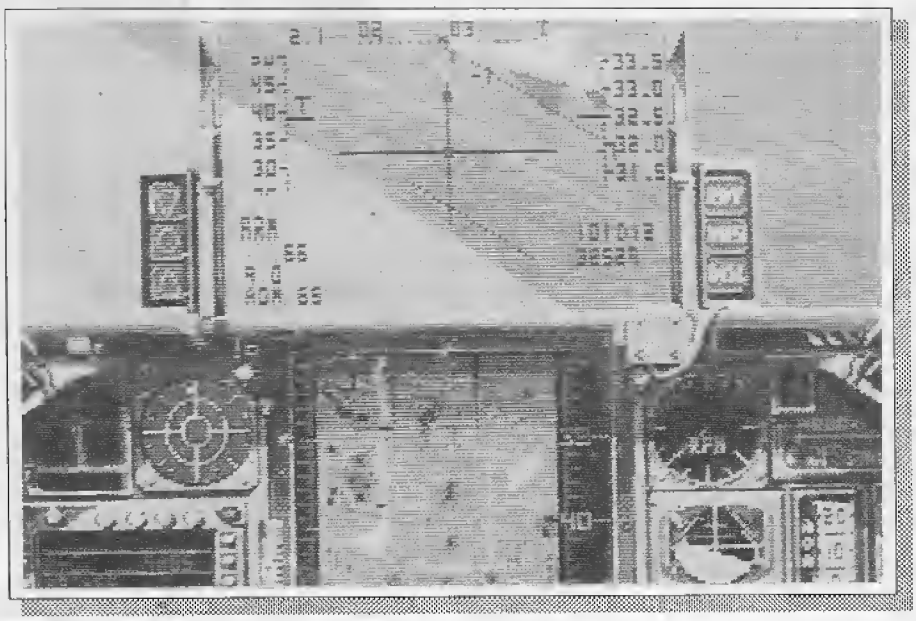
There is a list of the best fighter pilots and their merits called 'Sierra Hotel'. A wide range of armaments is available including two types of sidewinder air to air missiles, maverick air to ground missiles and free fall bombs to name a few. I found the lack of long range AMRAAMs to be a notable exception and I would have expected them to be included.

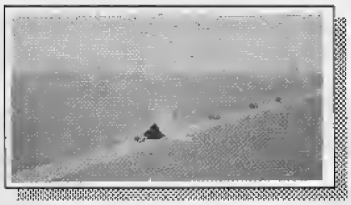
When first entering the cockpit you are met with an impressive array of instruments and displays, and to the untrained eye this may seem a little bewildering. After a short period of training the whole cockpit becomes familiar and understandable to anyone. It is not possible to see all the instruments from one view because there are also instruments and displays to the left and right. You may see your skilful hand on the throttle (on the left) and the other hand gripping the fly-by-wire 'stick' (on the right).

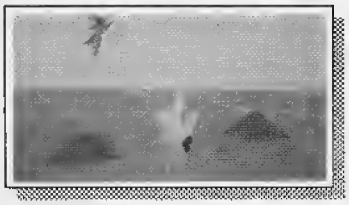
I found the complete lack of a VSI (vertical speed indicator) to be rather annoying, and to real pilots, like myself, who rely on such an instrument the lack of one is a little frustrating. The omission of an analogue altimeter is also a disappointment, especially when they went to all the trouble of duplicating the airspeed in digital and analogue form. Both of the instruments that are missing, are found in the real F-16.

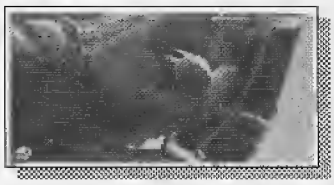
Apart from these complaints I found the cockpit to be well orientated, with clear readout from all instruments and displays. The emulation of the real F-16 cockpit is a joy to behold. The multi-mode Head-Up Display is exceptionally good, and is the best representation of a HUD that I have ever encountered in a combat simulator.

In the air the F-16 handles quite realistically, although the additional choice of control sensitivity is necessary rather than a feature, because at higher levels the jet simply does not behave itself. Stalls in this simulator occur at about 100 knots. The stalls themselves are not like the real thing in the least. Instead of losing lift from the wings and one dropping, the jet squirms around uneasily and simply sinks. If you hold the control stick back the nose actually lifts, in fact once I man-









aged to do a vertical loop while stalled. I assure you that this in any real aircraft is simply impossible. Landings are also unnecessarily difficult. One actual F-16 fighter pilot commented that it was harder to land the F-16 in *Falcon*, than it is in real life.

One the whole *Falcon* flies competently, and responds to the flight controls including air brakes and flaps quite well. The addition of an autopilot and trim tabs are welcomed, and the ability to jettison some or all of the stores adds flexibility to missions. As a last resort *Falcon* is also fitted with an ejector seat.

Falcon may be controlled by keyboard, mouse or joystick. A mention must be made of the digitized female voice of the aircraft, authentic right down to the slight Tennessee accent. The real F-16's also talk. I thought this little feature was a great idea.

The view from the cockpit of flight simulators has always been a problem, simply because of the lack of it. It is difficult to fly VFR (Visual Flight Rules) when it is not possible to see beyond the instruments. The designers of *Falcon* have added an extra view in each of the four normal directions, being forward, behind, left and right. The extra view lets you look over the instruments and in this way it is possible to see a lot more than would normally be viewed from a simulator, although when looking forward the HUD is still in view with all its vital flight and combat information. It is also possible to view the jet from outside the aircraft, and from a satellite as well. All views have the option of magnification.

The landscape is drawn in solid 3-D graphics, and is detailed with mountains and rivers, bridges and skyscrapers, farms, villages, and electricity power lines. Some of the little cottages even have their own little water tanks on a stand. All the graphics scroll rather well, with objects becoming more detailed as you approach them. Other aircraft are also drawn in solid 3-D graphics, with the explosions, fires, chaff and flares drawn in raster graphics. All the graphics throughout the simulation is of a high standard and beautifully detailed.

Another great feature of *Falcon* is the combat manoeuvre training available covering many recognized dogfight manoeuvres. Loadable mission disks also leave this simulation in a wonderfully flexible position. When you have finally mastered all the missions which come with the simulation you can attack some new ones from a mission disk.

The ability to fly dogfight against a friend via a modem or by direct connection is also a bonus, but being able to do this with a friend who has a Mac or ST as well as with an Amiga is tremendous.

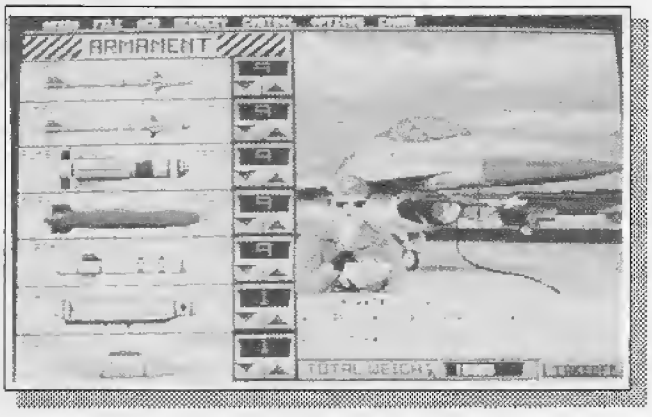
A Black Box flight recorder can also be invoked so that you may examine your combat manoeuvres.

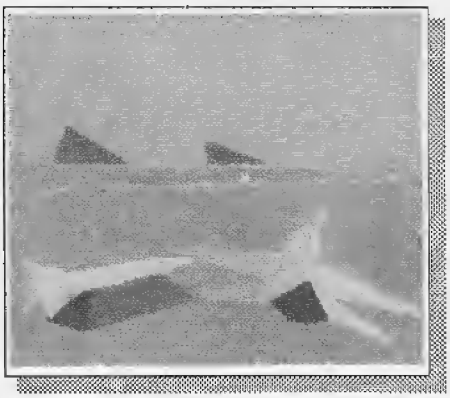
The 146 page manual which is supplied with *Falcon*, is very complete. Everything from basic flight training to combat tactics and even a glossary of fighter jock jargon is included. All documentation is easy to read and should be read so that many hints and tips may be picked up.

I really enjoyed *Falcon*, it is clearly the greatest jet combat simulator on the market at the moment. It is so close to the real thing that it becomes quite addictive and satisfying.

I feel though, that every man and his dog are making jet combat simulators with an F-16 in it. Sure F-16's are hot, but there are hotter and more exotic jet combat aircraft than the Fighting Falcon. Take the JA 37 Saab Viggen, for example, or maybe even the very new EFA which is the most potent fighter to date.

I think that *Falcon* is the first of a new breed of very realistic and graphically accurate combat simulators, and paves the way with a new set of standards. In the meantime I'll be flying *Falcon* and 'watching my six'. ❑





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Clicked on Games

The MUNCHER

A preview by Terry Archer

It seems time to take the black arm bands out of mothballs and mourn the passing of an era. No, nobody famous has died. But it seems that for some crazy reason C64 users are viewed as a dying race. Or that is the impression we at the *Commodore Review* are given by software companies over the past few months. The amount of new software coming onto the market for C64 users is alarmingly low. The software that we are seeing is not to the usual standard we have come to expect.

This month I was given, what seems now to be a rare privilege indeed, and that was to sample a game on the 64. What seems even more remarkable was the fact that it was a fairly good game.

The Muncher gives you as a prehistoric monster the ability to run riot through the modern day city of Japan. I am at a loss though to see why they decided to set you free in Japan, because from the scenery in the background it could be any modern day city of the world!

But don't think that just because you are an angry monster, you are going around causing death and destruction without a purpose. The reason for you being in Japan is that the Japanese came over to your private hatchery and without a thought for anybody at all, stole all your children who were so young that they had not even reached the stage of hatching out of their shells. So your purpose as an angry mother, is to collect together your children, take them to a nuclear reactor so as to give them the conditions they need to enter the outside world. Then leaving them there you can set off to find more of your children.

If you should die before all your children are recovered, then your offspring take up the challenge from where you left off.

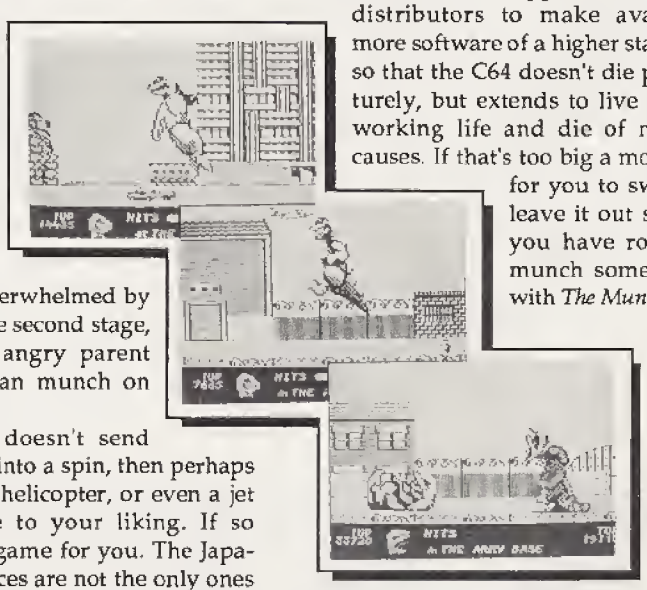
This would have been quite a simple process, but because you are a 21 tonne prehistoric monster you can not travel anywhere without attracting some attention to yourself. So the Japanese on hearing that you were coming to see the land of the rising sun, have set up a welcoming committee in the form of the whole Japanese Army, Navy, and AirForce.

This game should have the gastric juices overwhelmed by the middle of the second stage, because as an angry parent monster, you can munch on the odd human!

But if that doesn't send your taste buds into a spin, then perhaps a petrol tanker, helicopter, or even a jet fighter is more to your liking. If so *Muncher* is the game for you. The Japanese Armed Forces are not the only ones that are in Japan to make you feel at home. Some of your relatives have come to see you during your visit to Japan, and I am sorry to say that they are not at all happy. I think what did it was offering them some of your aunt Mary's Fruit Cake. But you should have known that you can not offer somebody some of your aunt's Fruit Cake, who is over the age of fifteen and not expect them to hate you for at least two years.

Muncher is a left to right horizontally scrolling game, with graphics to the standard that we have come to expect from C64 games. The music and sound effects are reasonable, especially the screams that echo from the fearful residents as you prepare to gulp them down.

C64 users should appeal to software distributors to make available more software of a higher standard so that the C64 doesn't die prematurely, but extends to live out its working life and die of natural causes. If that's too big a mouthful for you to swallow leave it out so that you have room to munch some more with *The Muncher*! ❑



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Star Goose

by Richard Silsby

Your name is Scouser Gitt. Although it is amazing you remembered that as you can't even remember the number of spradjes you have had in the last hour. To your increasing amazement you can remember that you landed in Tokyo Bay a few days ago, crawled into the local Tokyo Bay Cyber-Disco and set about becoming totally blotto!

At that particular time it seemed as though one of the Tribal Elders was coming to see you. You had no idea why, but as long as he was buying the next round you would listen to what he has to say for at least one spradj.

"I've got a mission" said the Elder. He laughed a bit. "It's for you." "Fugerrit, pal," you slurred. "I'm grounded. I'm feared throughout the Federation. I'm wanted on 12 planets and I've got parking tickets on another 20."

Everything that took place after that conversation is a blur to you. You think your picked up your drink, tipped it over the Elder and danced away with one of the waitresses, your wooden leg thumping on the ground to the beat of the drum machine. Suddenly you fainted, taking the waitress with you to the floor. Now you wake up and find that you are in one of those new Star Goose planes, with your pocket full of cash and the countdown approaching zero in the landing bay.

As you are slowly leaving the docks of the mother ship that's been your home for who knows how long, you begin to read through your objectives for the mission on the planet Nom. They are as follows. You are to battle through the eight levels, collecting the six crystals on each level to progress to the next level. In order to replenish the fuel, ammo, and shield you fly into the tunnel marked with the necessary supply that you need. To collect the supplies you just have to fly into the eyes that approach you. While reading this you clutch your head and you notice the pain of the hangover.

Turning over the sheet of paper you read the final instructions you were given. Firstly, that you get a new Star Goose every 100,000 points. Finally, you are told not to keep the crystals for yourself and try to retire on the proceeds that they will give you. Because they inform you that they will never stop looking for you if you do try it. With the punishment being, they cut your wooden leg to make you walk always with a limp.

You return your eyes to the screen of your Star Goose, noticing the great detail of graphics that are presented in before your eyes. You take hold of the control stick and notice that the ship reacts well to your every movement. Finally you reach for your trusty, on-board stereo, and crank it up till it begins to vibrate around the room. But it's not the usual stereophonic sounds that you expected to come through, instead you hear a tune accompanying the sound effects of all that is happening outside your ship. You are pleased with what you see, hear and feel.

So you decide to accept this mission that the Elders of the Logotron Software world have put before you. You engage all the necessary on board controls, and the final countdown to the beginning of your first battle flashes up to the screen, with the following message in bold letters, "GOOD LUCK!"

Several days later you find yourself sitting in a bar. For the first time in many years you have decided to stay sober. The mission was such a success, and the graphics and music were so enjoyable that you decide to encourage all warriors in the local Star Systems to get hold of the game *Star Goose* which was made in your honour. Recommending it even to all the mere mortals of the distant planet Earth who can enjoy the pleasures of this game on their own personal monitors. ❑

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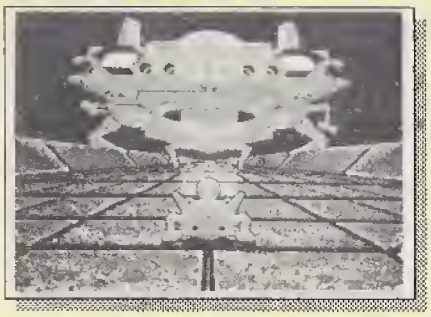

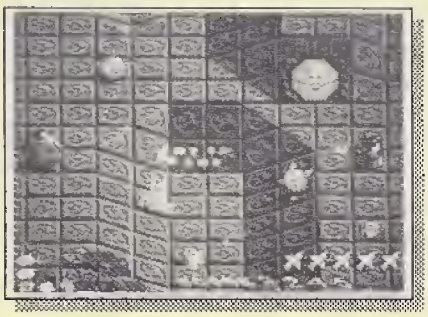

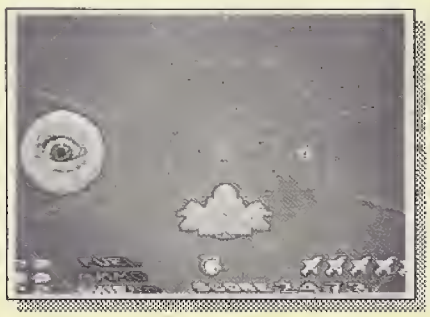

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Cosmic Bouncer

by John Hatchman

Life was easy, you had no problems ... until you became the first tennis ball which came to life. That's right, due a computer error you (a yellow tennis ball) were struck by a life-giving genetic beam.

Finding yourself on the other side of the galaxy you have no option but to face an adventure which is cluttered with disappearing floors, death tiles, acid blobs, diseased platforms, floating enemies, mystery squares and many other perilous surfaces.

The aim of the journey is to bounce and dodge your way through a challenging 22 levels and eventually return to Earth with the title "Cosmic Bouncer".

Cosmic Bouncer has very fine upfront graphics along with superb background settings which, though plain give the game a distinct three dimensional feel, through the use of clever design and color contrast.

I found the sound effects to be most enjoyable, varying from the bomp, bomp, bouncing sound of the ball to the sizzling noise made by the destructive scull plates you may have chosen to foolishly land on.

The background music has appropriately been placed. It has a repetitious melody that will put you in the mood of the game.

Each level of the game is different from the next and always more suspenseful and challenging than the last. The more you play the game the more tricks you'll pick up, like finding a secret passage that may take you to the next level or knowing which mystery square has what in it.

The major challenge in this game is to combine your patience, logic and intelligence to help you plot a path through the level you're on. This could involve you having to calculate the bounce of the ball's distance to either landing, or not landing, as the case may be on certain tiles.

The first "bonus stage" you arrive at should have been named a "Challenge Stage", good luck in trying to complete it, I definitely couldn't. The movement of the game has a smooth feel to it, with ball control being excellent.

I must confess though, in the game if you become diseased you turn to a most delightful shade of bright green, now normally you would rush to an "AID" platform so you wouldn't die, but I found playing with a green ball more enjoyable so I decided to suicide a few times.

If somebody asked me to define the game in brief, I would have to call it a game of strategy and patience. Definitely not your typical "let's go blast'em" type of game.

Cosmic Bouncer is a game which will keep pushing you to advance, to try and make you reach the next level. I warn you, this is a game that the whole family can become addicted to, so when you buy it keep it under cover, unless you enjoy having your family use your Amiga all day. ❑

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Our review copy came from Questor (02) 662 7944. RRP Amiga $49.95.

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(All from Shaun Turner!)

Game Hints

Amiga Cheats & Tips

● Here's a bunch of tips from Commodore Fan, Paul Millward. Thanks Paul, just phone us for your free copy of Workbench 1.3 or if you prefer you canchoose from whatever new games we have laying around here.

Better Dead than Alien

● Cheat mode is activated by typing "ELV" or "CHAMP". Pressing the following function keys will give you additional weapons:- (must be on the title screen)...

● F1 - Scatterbolts
● F2 - Multifire
● F3 - Auto-Repeat
● F4 - Armour Missiles
● F6 - Neutron Bomb
● F7 - Clone Ship
● F8 - Shield
● F9 - Skip Level
● F10 - Extra Power Bars

Defender of the Crown

● Hold down the "K" key as the main game loads. This will give you 1024 men and 1024 knights, as well as improved sword play!

Thunderblade

● Once the picture from the film Blue Thunder appears, press the "H" key. The screen should flash. To access the next level press "HELP".

StarGlider II

● As soon as you start the game, bring the Icarus to a complete halt. Select floating sight (press f) then pause the game and type "WERE ON A MISSION FROM GOD" (don't forget the spaces) and press "1". If you've done it all correctly the shield, laser and fuel displays will drop and they'll remain that way for the rest of the game. If you press "K" you will get a full complement of missiles, bombs and energy cube launchers and even the neutron bomb!

C64ers!

Robocop

● Reset the game once loaded and type:-

POKE 35028,173 (extra speed of game)
POKE 33034,173 (no enemies)
POKE 44179,96 (infinite lives)
POKE 44392,96 (infinite lives)
SYS 32768 restarts the game!

● Now that you all know there's a reward for sending in these sorts of tips, how about it! Even hints on how to beat a game without modifying it with POKEs or using a cheat mode will be considered.

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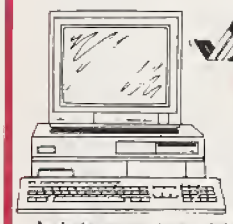

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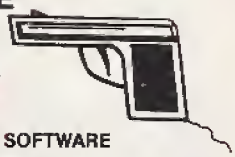

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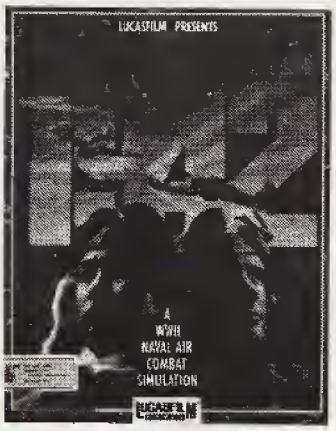

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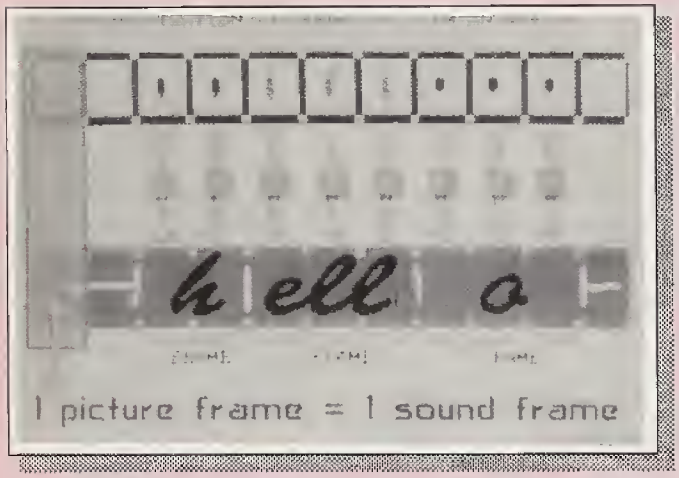
Mouth Movements in Animation

by Dennis Nicholson

Soundtracks using speech utilised in animation, such as cartoons etc, are prerecorded BEFORE the animated character is drawn, and the reason behind this is relatively straightforward. It is far easier to draw mouth movements on a character to match the sounds rather than attempting to record a voice to match the pre-drawn mouths.



For the following examples I will be using the 16mm motion picture television film format running at 25 frames per second. In Australia, and other European countries, film is projected at a speed of 25 frames per second (25fps). The USA projects at 24fps.

One more clarification before we proceed. For animation to make up one second of screen time you require 25 pictures, that is, one picture equals one-twenty-fifth of a second on screen, 25 pictures equal one second of screen time. What I classify as SATURDAY MORNING ANIMATION often uses a lot fewer pictures per second.

So instead of getting "Fantasia" or "Cinderella" type smoothness on screen, you get a much more jagged type of movement. The main reason for this is economy, the fewer pictures you have to draw the sooner the animation (cartoon) is finished. (Japanese animation is famous for this style). In an attempt to fully explain the use of speech in animation I will assume that we are producing "Cinderella-2", full 25 picture drawings per second.

After initial recording, the voice track is transferred to 16mm magnetic tape. This is basically the same recording medium as you get on cassette tapes, but in 16mm sprocketed format. When running the 16mm magnetic tape through a sound head it is possible to "break down" the words recorded. For example, the word "HELLO" is actually made up of three separate syllables "H-ELL-O".

So by marking the beginning of the "H" sound on the 16mm tape, and then marking the beginning of the "ELL" sound you will be able to determine the frame length of the "H" sound. In the "16mm" picture example I have made the "H" sound two frames long, "ELL" lasts another three frames, and finally, the "O" sound is another three, thus giving the complete "HELLO" a length of eight frames.

Because the 16mm sound tape is the same format as the 16mm film it is obvious that the "HELLO" mouth animation will be eight frames long.

If, and when, the final edited version of sound and film is transferred to another medium, such as videotape, the 16mm film and 16mm tape are run in unison, in other words they are in sync (synchronised). So if you have counted the correct number of frames in relation to each word recorded on the 16mm tape, and then animated the same number of mouth movements on film, your final image should be perfectly matched to the voice.

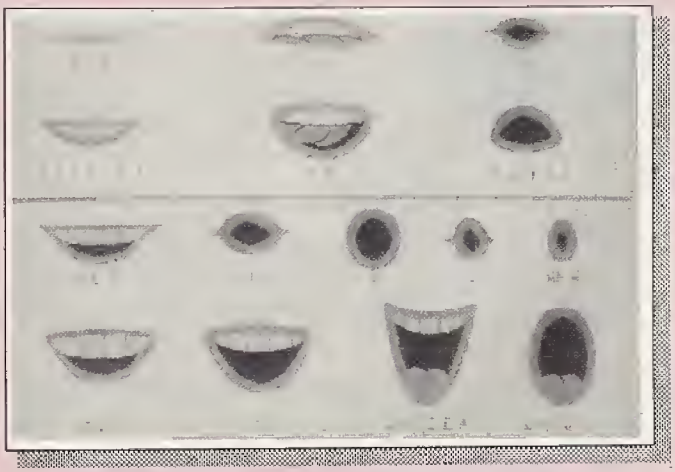
Synchronising the voice with the picture is only the beginning of the actual animation process. You then have to decide what type of mouth shape you are going to have for each syllable of sound. To aid you with this I have included the "Mouths" picture. Try making the sounds yourself and looking at the mouth styles.

For an even better idea of how a mouth moves when it speaks just stand in front of a mirror and talk to yourself. You may get some rather strange looks from others, but it the best way to study the movement. You will be surprised just how busy your mouth gets when it is chatting away.

It is also important to remember the style of character you are animating. Mouths fit the mood of the character. Some characters always yell at the top of their voices, others mumble words out of the side of their mouths. All this has to be taken into consideration when drawing the mouth.

The same basic principles described above can be used with animation in the Amiga environment. It is possible to record a voice via digitizing into a program such as Aegis' *AudioMaster*, and from there break down a sentence into words and syllables.

Dennis Nicholson - Editor of GRAPHICS-PALETTE, the desktop video disk-magazine for the Amiga. ❑



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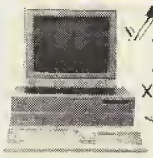

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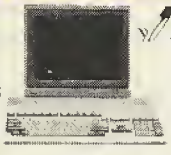

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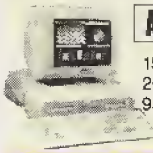

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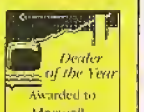

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The Hewlett Packard Paintjet Printer

by George Kimpton

How often have you sat in front of your Amiga drooling at the fantastic graphics on the screen, wishing you could print them out in full colour to show others?

It must be one the most common frustrations felt by Amiga owners who, like me, own ordinary black and white printers. Even printers with special colour ribbons leave a lot to be desired with their often smudgy and weak colours. These ribbons are also very expensive for a few pages and the alternative printers carry frightening price tags.

Well, dream no more. Just imagine that terrific picture in the last Megadisk or the masterpiece you have just created, adorning the wall in the den or on the front of a school project or business report.

Now you can actually record it on paper in glorious full colour for all to see. You can even create your own posters if you have Deluxe Photolab. The possibilities are endless, particularly if you have video digitising equipment. You could even print your own full colour pin-ups or pop posters, personalised to suit.

Hewlett Packard have come to the rescue for us dreamers. The HP Paintjet, which is supported by a driver program in Workbench 1.3, allows you to print those graphics in full colour with colourful and decorative text. Well, 330 colours anyway. It also handles Grey Scale very nicely thank you for those programs that don't support colour. It's just the thing for *Deluxe Print*, *Prowrite* or *Professional Page* etc..

Deluxe Paint II/pic from Megadisk

When I managed to get my hands on one recently I could hardly wait to see it in action after all the good things I had heard. After about five minutes of perusing the handbook, which incidentally is very easy to follow, I took the plunge and let my twitching fingers connect the printer to my Amiga 2000 using a standard Epson type cable.

No special interface is needed with the Amiga as long as you have the driver program now standard with Workbench 1.3. Just make sure you buy the printer model with the Centronics output and set all the Dip switches to off.

Glorious Colour

Selecting *Deluxe Paint II* and a very colourful picture from a data disk I clicked on the print button and sat back expectantly. Mustering my patience with difficulty I watched as the paper slowly emerged from the printer.

Oh what a feeling, as they say on that TV advertisment. The picture emerging from the printer was almost an exact copy of the screen in glorious glowing colour. Well, not glowing perhaps. The one complaint I do have is that the colours are slightly darker than on screen but it may be possible to correct this through Preferences 1.3 and using the recommended paper. Incidentally use of some papers may clog the ink jets.

It was almost addictive. You just cannot help yourself, you stare fixedly at the printer mesmerised by line after line of colour rising inexorably from it. I found myself madly searching for my best and most spectacular pictures to try and fault the performance.

When shown the resulting prints, my friends put that disbelieving look on their faces until they saw it in operation, after which they surreptitiously started dusting the moths out of their wallets.

My sons, suitably pop-eyed, promptly souvenired several pictures to show their mates at school. In fact the pictures seemed to disappear nearly as fast as I printed them. It even caused a flurry at work where the diehards ignore anything that is not an IBM or a Macintosh.

For the price, $2,657, the printer is exceptionally good value, printing either text or graphics with excellent clarity in almost total silence. After using a dot matrix printer one is tempted to keep looking to see if it is still running, it's just so quiet and quick.

Speed

Printing speed is good at a quoted 167 char/sec at 10 cpi and 300 char/sec at 18 cpi. Figures aside, the speed of a NLQ

Advanced Basic

Nick van Heeswyk

I know what you're thinking - another Basic article! But this is a bit more advanced. If you are still a beginner I suggest you read the articles by Oben Candemire that have appeared in this magazine before trying the areas I will cover.

I'll quickly go over the input statement because I definitely think you should learn it, but I will not go into any detail. If you want detail on it read Oben's Basic Tutorial Part II in the January 1989 issue.

Starting off

The input statement allows you to assign some words to which you type to a string. (eg) a$

Type in the following.

```
10 Input"Your name please";na$
```

Run the program and do what it tells you to do. If it displays Syntax error in 10 then chances are you have typed it in wrongly. Once you have typed in your name and pressed return, ready should appear. Now type "printna$". What you typed in should appear. That's all I will tell you. For more info read Oben's January 1989 article on Basic programming.

Dimension arrays and left mid right $

When I first tried to use Dimension arrays I was totally stuck. But one day I went through my programming books and noticed it. I tried to work it out and finally succeeded. When I looked at it, it was rather easy.

After reading that bit above you should see it is essential that you read this article carefully and note some points. Most probably if you are just starting advanced Basic it won't come to you straight away. So try again if at first you don't succeed.

Using Dimension arrays you can set up a grid in which you can store a sentence, word or number. You can either set an array to a variable (numbers) or a string (words).

Type in the following program and run it.

```
NEW(return)
10 DIM A$(1,1):REM SET UP AN
ARRAY
15 A$(0,0)+"HELLO":A$(1,1)="THERE":
REM ASSIGN A WORDS
20 PRINTA$(0,0):PRINTA$(1,1): REM
PRINT WORDS
```

As you can see it should display

```
HELLO
THERE
```

Line 10 sets up an array 2 by 2 (including 0).

Line 15 gives point 0,0 in the array "HELLO" and point 1,1 ="THERE".

Therefore it prints HELLO and prints THERE under it, because at points 0,0 and 1,1 and the words HELLO and THERE.

If you change the first line to DIM A$(10,10) you will set up an array 10 by 10 (including 0).

Now I'll go on to RIGHT MED LEFT$.

Right mid and left$ can be used in either displaying the right half of a word (right$) or the middle of a word (mid$) and of course the left side of a word (left$).

I won't go on with these commands, because if you don't learn to use them yourself then you will never learn how to use them properly. I have only written this article so you will start looking at advanced basic and show you what the commands will do.

Now type in the following program.

```
NEW (return)
10 A$+"COMMODORE RULES O.K"
15 B$+LEFT$(A$,10):C$=MID$
(A$,10,5):D$=RIGHT$(A$,4)
20 PRINTB$;C$;D$:PRINTA$
25 END
```

After typing in that simple program and running it:

```
COMMODORE RULES O.K
COMMODORE RULES O.K
```

should appear on your screen. Now for an explanation.

Line 10 gives A$ a sentence of "COMMODORE RULES O.K'.

Line 15 gives B$ COMMODORE, C$ RULES, and D$ O.K.

Line 20 prints B$, C$, D$ and A$ on a new line.

I know the program does not do a lot but it's just a demonstration. How does LEFT$ actually work? It's very simple to understand. Obviously LEFT$ is the left side of a word. If you look at the words COMMODORE RULES O.K and count 10 letters along (including O) you will get to the end of the word COMMODORE, so if where it says B$=LEFT$(A$,10) to B$=LEFT$(A$,5) and run it only half of the word COMMODORE will appear on the screen.

MID$ works from the right hand side of the sentence COMMODORE RULES O.K so if you count 10 from the right hand side you should end up at a space then count 5 to the right and you will end up at the end of the word RULES and that's how MID$ works. Here comes RIGHT$, this works basically the same as LEFT$ but it starts from the right hand side of the screen.

Now if you count 4 from the right hand side you will end up at a blank space and then the Commodore reads whatever is to the right (e.g.) PRINTLEN("COMMODORE'").

The number 8 should appear. Now if you count the number of letters in COMMODORE you should get 8.

Now I'll list some of the error messages you can come across.

BAD SUBSCRIPT : The program tried to reference an element of an array whose subscript was outside the dimension of the array.

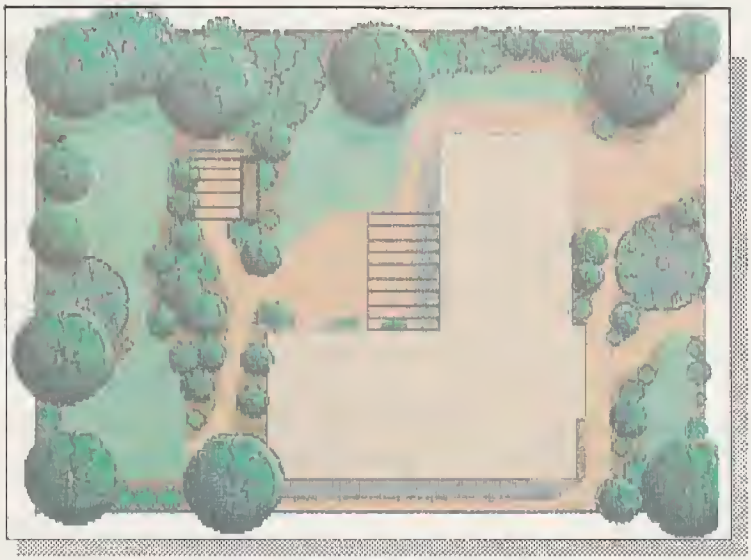
REDIM'D ARRAY : an array name appears in more than one DIM statement, or has been both implicitly and explicitly DIMensioned.

STRING TOO LONG : strings can be a maximum of 255 characters long.

SYNTAX : basic doesn't recognise the statement.

TYPE MISMATCH : number used in place of strong, or vice versa.

That's all for this month. More soon.



Landscape Design/Photon Paint

text only printout has to be seen to be believed, zipping along in almost complete silence (47 seconds per A4 page).

Graphic printing is not bad either at around two minutes per picture for a normal full colour screen from *Deluxe Paint*. Depending on how you set up preferences, dithering and smoothing can extend this printout time to around 15 minutes, but the colours make the waiting worthwhile.

Unfortunately the inbuilt fonts are limited to Courier (10 char/inch) and Gothic (12 & 18 char/inch) which may be a problem for some text documents. These are selected from the software or through escape codes. With *Prowrite* or similar programs which have their own page controls and use bit-mapped graphics this is not a problem. Preferences usually take care of the other set up controls.

For anyone not using a text program, complete control of text, colour, style, line spacing etc. and page formatting is possible through an extensive range of escape codes.

Provision is also made, for those who might like to customise their fonts, to instal one set of user-defined characters through escape codes. Character dot cells are a 15 X 30 matrix allowing good clean characters. Graphic printouts have to be seen to be believed. The colours are provided from two cartridges, one with black ink and the other with cyan, yellow and magenta in separate compartments. No messy ribbons to give you dirty hands, thank goodness. Specific dot patterns are used to achieve the 229 colours, white or the paper colour being the 230th colour.

The cartridges do not leak and are easily primed or cleaned and installed. Life expectancy for the cartridges is good with black being quoted at 1100 pages for 1000 characters per page. Colour graphics are quoted at 180 pages because of the higher density printout.

Resolution is either 90 or 180 dots per inch, allowing the printing of 330 different dot patterns to give the 330 colours available. Escape codes can be programmed to print in any of these colours should you so wish.

As I said before colours do not always match the screen exactly being mostly a darker shade. It becomes obvious after a few printouts that graphic palettes may need some adjustments to colour Saturation and Value for best reproduction. Care is also needed in the selection of dithering as F-S gives some funny results with large background areas of light pastel colours.

However it must be remembered that for good colour printouts Hewlett Packard recommend their own glossy surfaced paper. Since I used ordinary computer paper this could account for some dullness or mismatching of colours due to the greater absorption of the ink by the paper. Hewlett Packard's own paper is provided with a special coating which minimises ink absorption and loose surface material which might clog the jets.

Generally I found the printer very easy to use. At work it has been extremely reliable, not requiring any special care or priming after standing idle for a week or more. There has been no sign of clogging of the ink jets even though ordinary computer paper has been used all the time.

Transparencies

One very useful feature for business people and those who give lecture presentations using overhead projectors is the ability to print on transparencies. Using a special arrangement of the control keys or software controls it is possible to obtain good colour prints on overhead transparencies using multiple passes of the print head. This means you can transfer any graphics direct from a paint program o database records to the big screen in fu colour using this facility.

This printer opens a whole new wor for those who can afford it. Business pre entations or reports can be produced full colour rivaling those printed on t Mac in black and white. School p jects will take on a new life be the envy of the have-nots. With wide range of software now av able for the Amiga the sky is limit for those with imagina and a Hewlett Packard Pai printer. I know I am cou up the dollars to see when be lucky enough to own The world will h oyster then.

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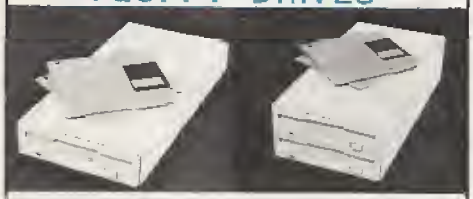

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Page Stream: Desktop Publishing for the Professional?

by Jon Benjamin

Until now, Professional Page was the only choice available, to desktop publishing professionals. Now there is a contender who looks set to blow Gold Disk clean out of the market. But there are a few drawbacks yet. Jon Benjamin, a mad keen dot matrix user, loved it. Watch for my comments at the end - AF.

Hang on to your hats, it's here! The biggest breakthrough in Amiga application software this year and the best piece of all-round DTP software available on any computer anywhere (in its price bracket).

How is it better than any other desktop publishing package on the market? You've got to see it to believe it. A demonstration of this software is a must for any true idea of its power. The bottom line of any DTP package is its output. Page Stream puts out the best quality work you will ever see on your dot matrix printer.

"dot matrix!" some say, "What on earth are you saying? Who in their right mind uses a dot matrix printer for DTP?"

"Why ... we do!" the majority of Amiga owners scream, and for a good reason too! Most of us can't afford laser printers, or access to linotronic typesetters. And it seems most quality DTP packages have been catering for the professional users only, barely giving thought to dot-matrix output.

Times have changed. Congratulations to the makers of *Page Stream* for thinking of us when they wrote their software. So it has no support for anything but dot-matrix printers?

Wrong! *Page Stream* supports full PostScript output complete with four colour separation. Don't get this reviewer wrong, I have seen it's laser output - but I wish to focus on its usefulness to the majority of us - dot-matrix output.

Firstly, how does it do it? *Page Stream* discards the Amiga printer-driver system totally, replacing it with a very powerful set of its own. Most popular printers are supported including C8510A, Colorpal, Dotmatrix (generic driver), EPS, EpsonQ, EpsonQC (24 pin colour), EpsonQW (wide carriage), EpsonX, EpsonXC (9 pin colour), EpsonXW, HPLaser, IMG, MACEPS, NECP6, NECP7, POSTSCRIPT, Xerox 4020 BW, Xerox 4020 C.

Postscript output from Page Stream

And the way *Page Stream* talks to your printer is like young lovers whispering in the night. Imagine rounded curves on all letters, not staircased as we are used to. Imagine fast logic-seeking output that stops quickly when cancelled. Imagine taking a block of text and printing it diagonally and seeing it print perfectly! Imagine the end of your frustration trying to make your printer perform to what you knew it could do, but nothing seemed to give better output than notepad. (Sure, it always looked good on the screen).

Well your dreams have come true. *Page Stream* will breath new life into your printer. (I personally hopped around the room clapping my hands happy to have lived to see someone had finally taught the Amiga how to talk to dot-matrix printers).

Okay... Okay it looks good! But what else has it got ? Well, I am by no means a professional DTP person, and all I can find so far is:

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- Full Object-Oriented drawing import (ie Aegis Draw)
- Text Importing (inc ascii & popular standards)
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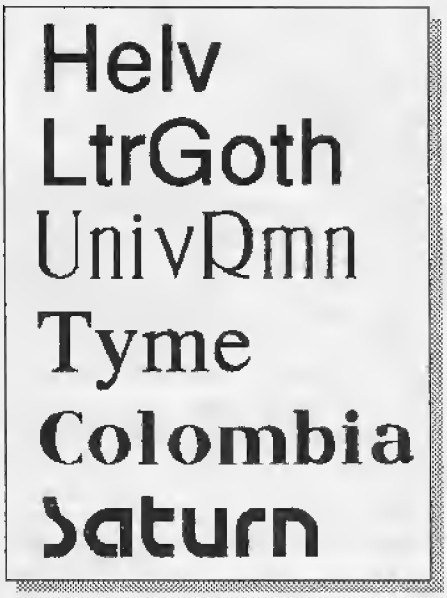
- Text types include "Helv, LtrGoth, UnivRmn, Tyme, Colombia, Saturn, TomHud, Artistic, Creative, Oriental."
- Textsizes (perfect scaling) include 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 18, 24, 30, 36, 42, 48, 64, 72, 108, 144, 180, 216 on each font!
- Text styles include "Normal, Backslant, Bold, Underline, Double Underline, Italic, Light, Mirror, Outline, Reverse, Shadow, Strike through, Upsidedown, Subscript, Superscript". (Can be mixed! ie Italics+Shadow+Underlined)
- Over 40 fill pattern styles plus custom fill editor. Even your text can be pattern filled!

An important point should be made here. I have talked to many DTP users (mostly from the MSDOS world) who cannot believe the flexibility of *Page Stream*. Some were complaining of their big-name DTP packages ($1000-$1500) not giving anywhere near the font type, size, style, range available on *Page Stream*. Some systems discussed didn't even allow font changes within one column! Maybe we shouldn't take our Amigas so much for granted. *Page Stream* has impressed me no end. I have owned an Amiga since 1987 and so far no other applications package has knocked my socks off the way this one has.

But one man's heaven can be another man's hell!

I must add at this point that there have been some unfavourable comments and opinions directed at this software by various users. I will attempt to balance



Dot matrix output showing various font styles

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this seemingly biased review of mine (I can't help it if I love it!) with the noted imperfections brought to my attention by those other users.

Firstly, most users (testers only, not owners of the software) are finding it difficult keeping the software running at all. Constant Gurus, crashes, and lockups are common. I can understand some of these complaints and I think a small percentage of crashes may well be software bugs. But I firmly believe the majority of errors experienced are user faults.

I worked my way through most of the tutorial until I felt confident at controlling the software. So far my wife and I have used *Page Stream* to produce over 40 finished documents, using most of the available tools and accessories available. My wife, Sue, has never crashed it. I have crashed it once.

I was testing the Variable Zoom function, and overdid it, (Trying to zoom past a pixel).

In all fairness I agree that if you stick the disks in the drives, double click on the icon, pull down windows randomly and operate strange functions without any forethought, it will crash. My opinion? It could be made idiot proof and probably will be. This is it's FIRST release version, give it a chance. Remember *Publisher 1000* ? How about *Visawrite 1.0* ?

Once learnt properly this software will operate totally error free, and will become easier to use the more effort you put into understanding how it was designed to work.

Next complaint- the on-screen text looks terrible! (There's no pleasing everyone!) Agreed, the on-screen text is the same blocky looking characters we're all used to seeing when we re-size fonts. This greatly speeds up all manipulation of text.

No, whichever way I look at it, *Page Stream* has to be the best Value for Money applications software title to be released on the Amiga so far today.

Basic system requirements are Amiga (any model) with minimum of 512k ram and two drives. Realistic minimum system, 1 meg ram and two drives. Comfortable system requirements, 2 meg ram (more the better) and hard drive.

This review is based on usage of Amiga 1000, (3.7 meg ram, 30 meg hard drive, 2 x 3.5" drives, 1 x 5.25" drive, 1.3 workbench system, G.O.M.F 1.3 Hardware, Timesaver, 1.2 Kickstart Chip set built in, 1081 monitor and anti-glare screen.) Printer used , Epson LQ500 (24 pin dot matrix)

I will stand by my opinion of this software to the point of offering to any interested user a full demonstration and will remain available on (02) 4777098 for any queries, problems etc. ❑

Our review copy came from Computermate (02) 457 8118. RRP Amiga $329.00.

Page Stream - For serious Users

by Andrew Farrell

I was also enthusiastic toward Page Stream during my initial testing. It did fail one or two times during stressful operations such as rotating a very full text box - something most other DTP's can not do anyhow.

The biggest let down are the fonts. There are only two postscript fonts - Helv and Tymes which are in actuality Helvetica and Times. The next catch is you can not use standard Amiga fonts. Page Stream has its own funny format. So, until more fonts arrive, the program has some serious limitations.

For serious Desktop Publishing, a program that works most of the time is not good enough. A page of design can take many long hours - an unexpected crash would be devastating. Mind you, Professional Page still has bugs, but not nearly as many as Page Stream. There is a big difference between light hearted Dot Matrix signs and newsletters to pages of tightly packed text. My advice is hang off. Page Stream has the potential to be the best by a long shot. There are hundreds of features Gold Disk have not yet implemented, although version 2.0 is supposed to be a total rewrite that does include Page Stream features. The next version may be better. For Dot Matrix users - go for it. Program of the Year material. ❑

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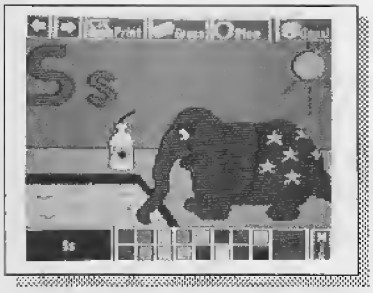
Assorted software for the C-64

Overview by Eric Holroyd

I recently had the opportunity to check over a whole batch of newly-arrived programs, all on disk, for the good old 64. They must have just been unpacked from the shipping container because they're nearly all from the same US software house, PolarWare.

There's a lot of good stuff for the younger kids in this lot, a good thing too I reckon, as in a lot of families Dad has got himself an Amiga and handed the 64 over to the kids.

First up was one of several *Sesame Street* programs, all of which feature the Jim Henson characters from the TV show. It's a computer colouring book with the joystick being used to make point and click selections of pictures to color in with a range of colours selected from a pictorial menu. The on-screen pointer is a pencil which is manoeuvred into the section to be coloured in with the joystick, then a press of the firebutton floods the area with the colour.



Letters for you

I quite unashamedly admit that I had great fun colouring in some of these pictures myself (all in the name of research journalism, of course!). It's so easy to use that my five-year-old grandson took over and worked it out for himself very quickly. I'm sure that if I'd have sat him down in front of it a couple of years ago he'd have been able to manage a lot of it too.

The menu bar at the top of the screen shows a Left and Right arrow (for getting the previous or the next picture from disk), then there's: Print, Erase, Stop and Oops, all with appropriate icons. All the pictures can be printed on paper, and the opening screen when you first load up asks which printer you want and which type of printout you'd like. This is the only part where Mum or Dad would have to help the younger kids and once printer selection has been done loading continues and the first picture and colouring-in menu appears.

The Okimate colour printers are supported so if you (or your kids!) have one of these - or a compatible - then they can have colour printouts of the pictures they've coloured in themselves.

If the Print icon is chosen, a little window opens over the picture and asks if the printer is switched on and ready. There's a pair of Smiley icons here too, one smiles (to signify Yes) and the other frowns (for No). Not a problem for the littiies! They understand this kind of pictorial terminology better than a lot of we adults give them credit for.

I'm a firm believer in teaching the kids without letting them know they're being taught, and these three packages do just that. They're all on different subjects, with the names virtually speaking for themselves:

Numbers Count

Letters for You is obviously about the alphabet. *Numbers Count* features numbers with the Sesame characters. *Opposites Attract* has nice pictures in pairs, showing things like Happy/Sad, Empty/Full etc. There are 26 pictures on the first one and 30 on each of the other two so there's a lot of fun for the kids here. RRP on each one is $29.95.

Holidays and Seasons

From the same programming and art team comes another nice one called *Holidays and Seasons*. This is billed as a Computer Colouring Book for ages three and up, and it makes Posters, Banners and Calenders using the same type of printer set-up and menu system as the three above.

There are 30 line drawings of events throughout the year including: Christmas Day, New Year, Mother's Day, Father's Day, Spring, Summer, Fall, Winter etc and there's a sheet of stickers included in the package to decorate the child's printouts. Again, colour printouts are supported and the line drawings may be coloured in exactly as in the Sesame Street programs. Also, a sheet of coloured stickers is included to personalize the printouts. RRP $39.95.

Dinosaurs are forever

Another package in the same series is called *Dinosaurs are Forever*. If my team of grandsons are indicative of present day kids, then this is a surefire winner. Anything to do with dinosaurs and they're in

like Flynn. Must be something to do with those Saturday morning cartoons on TV.

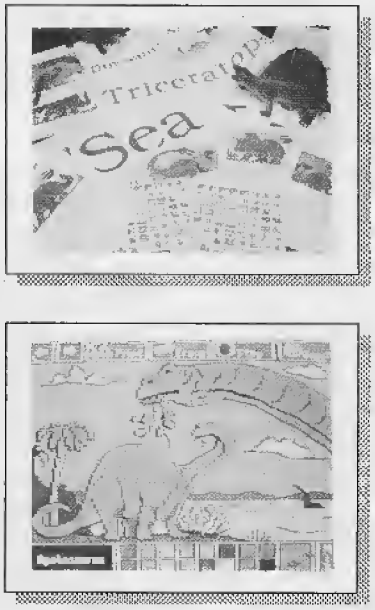
Anyway, this one is again for three years and up, it's a colouring-in program, it lets the child create picture calendars with 26 different dinosaurs for decoration and there's also a banner-printing option. Again, B/W or Colour printouts, depending on your equipment. Incidentally, these are properly-drawn dinosaurs so there's a built-in history lesson where the child learns to recognise the real thing rather than a cartoon invention. RRP $39.95.

Graphics Magician

A program for slightly older kids and adults is the *Graphics Magician*, which is billed as a Painter and Animator. It has a full palette of colours, a mixing feature that allows over 70 colour blends, eight different brushes, a text entry feature, and has six types of moves that you (the artist) can use within your picture to create animation.

You may also draw lines, circles and boxes and fill enclosed areas with colour etc so the possibilities are endless. Pictures produced with *Graphics Magician* take up less disk space than those drawn with other packages, with the example given in the manual of a GM pic taking 500-1000 bytes whilst other programs would take up 8000 bytes for the same picture. The reason for this is that GM pictures are stored as a series of artist moves rather than the individual coloured dots that are drawn by those commands. These commands are called sequential pictures and the computer rapidly goes through all those moves when you want to view the pictures.

A big plus here too, as GM pictures can be called from your own programs so if you've written something and want to have illustrations too you can do it



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with this package. The manual shows how, and there are some samples on the disk to see how it's all done. Great stuff. RRP $19.95.

Transylvania

For more adult 64ers there was a range of games included in this batch, the first of which was *Transylvania*, and it's said to be a new, enhanced version of this classic graphics adventure. It features a vocabulary of over 1000 words and understands full-sentence and even multiple-sentence commands such as Take the shovel and inspect it carefully, Go North and climb the tree.

The graphics are very good and have a built-in fast loader to display them quickly. These graphics were all done with the *Graphics Magician* by the author - Antonio Antiocha - who is a part fiction-writer and part computer artist. Seems like just the guy to write a good graphics adventure and he apparently got an award from Billboard Magazine for the *Transylvania* visuals. Definitelyworth a look if you're an adventurous type. RRP $19.95.

The Crimson Crown

This is sub-titled `Further adventures in Transylvania' and has all the same ingredients as above. There are over 100 graphics in this one and, like *Transylvania* itself, I think it's extremely good value for money. A good example of an illustrated interactive novel. RRP $19.95.

Oo-Topos

Next up is *Oo-Topos*, a Science Fiction adventure which takes place in 1995 AD, Earth Time. Briefly, an interstellar transport carrying power transfusion waste has collided with a meteor and burst open. Its deadly contents are heading for Earth and will wipe us all out unless you (again!!) save the world by completing a mission which involves delivering the seeds of a chemical compound that will neutralize the space junk.

This sounds simple enough, but on the way your ship gets ambushed and has to force-land on the planet Oo-Topos where you're grabbed by hostile aliens and imprisoned. It's quite a task to escape, recover your ship, and complete the mission before Mother Earth gets destroyed.

Again, good graphics done with *Graphics Magician* and the ability to understand complicated commands are built-in. The author is Michael Berlyn, who has interactive novels such as: *Cyborg, Suspended, Infidel* and *Cut-throats* to his credit. RRP $19.99.

Xyphus

Xyphus is said to be Fantasy Role-playing at its best!' and has six separate scenarios wherein you may create and develop up to four different characters within a single game. This is one of those games where you build up Strength, Weapons, Hit Points, Endurance etc and weigh everything up very carefully (but quickly) in order to survive the various situations and battles that occur whilst trying to destroy the Demon Lord, Xyphus and claim the ultimate reward.

You may manoeuvre your four characters independently or as a group through the various scenarios gathering clues and weapons and must successfully complete all six scenarios to win the game. There's a handy poster included which helps to set the scene too. RRP $19.95.

Sword of Kadash

All of the above came from Polar-Ware whilst the remaining two came from a software house named BearWare.

The first of these two is a Fantasy Action Adventure called the *Sword of Kadash*. It's a game where you develop your alter ego's skill and power in a graphically displayed world with all kinds of traps to avoid and puzzles to solve. There are many strange creatures, cursed objects and magnificent treasures to deal with and it's all up to you. The graphics are fairly basic but the game plays well, with either keys or joystick. It was originally an *Apple II* game and was ported over to the C-64 by the *Dynamix company*. RRP $19.95.

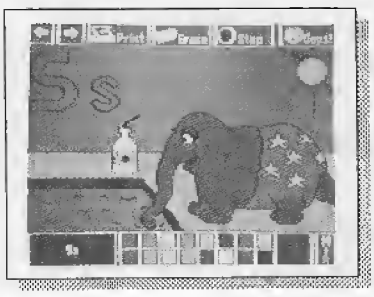
Arcade Album #1

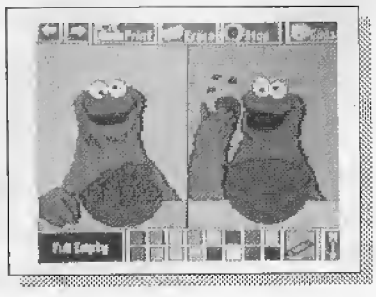
Last, but by no means least, is a package called *Arcade Album #1* which is a compilation of three `oldies but goodies'. There's: *Spy's Demise, The Spy Strikes Back* and *Thunderbombs*. I'd played the first couple at least two years ago but I played them both again for quite some time and thoroughly enjoyed them all over again.

Demise is basically a ladders and platform type of game where you need to be very quick to avoid getting wiped out before you have a chance to collect everything and reach your goal.

Spy Strikes Back involves searching through 100 rooms to find pieces of a puzzle that will save the world. All the while you're being chased by the robot guards and the action is fast and furious. The graphics on *Thunderbombs* are laughable by today's high standards but there's absolutely nothing wrong with the gameplay. I loved playing this one and can't really say why, except that it plays very well and is one of those addictive games that prompts you to say just one more time then I really will go to bed'. It's priced right too!! RRP $19.95.

All the above were supplied for review by Computermate Products (02) 457-8118. ❑





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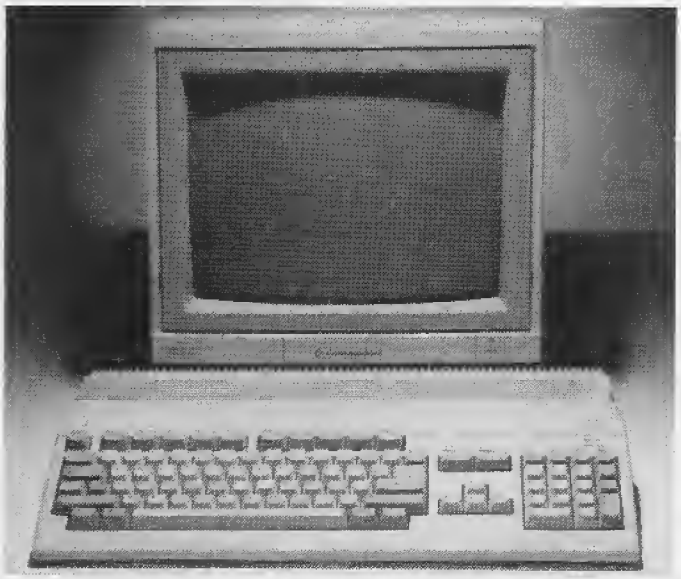

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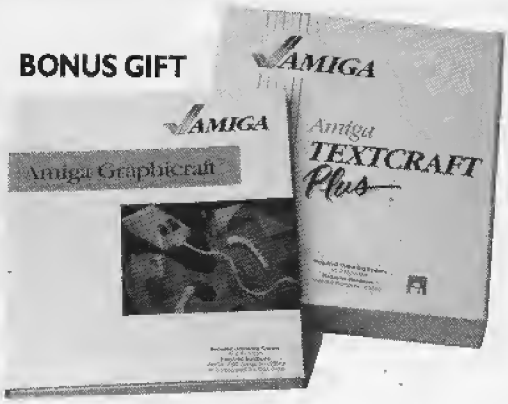

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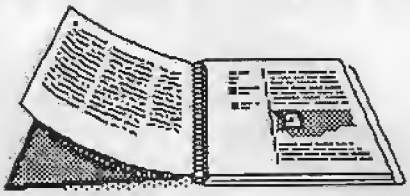
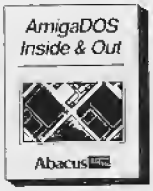


by Andrew Baines

Amiga DOS Inside and Out



From the Abacus range comes another book of excellence. *AmigaDOS Inside and Out* is based around the CLI, and is perfect as an introductory book to the CLI. Starting from scratch, the book goes through making a backup copy of the Workbench disk, introduces how to open a CLI window, and then starts on the commands.

Each command is explained in detail, with all of the various options for each command expanded on. The important feature of the book is that it handles Workbench 1.3. This means it is ideal for all Amiga users, as the new commands in 1.3 are fully explained in their own section. Also, if certain commands have been changed or upgraded by Commodore, the differences are outlined so that the reader can choose which is the best set of commands for their system.

After covering all of the 1.2 commands in about 80 pages, *AmigaDOS Inside & Out* explains about all of the devices available on the Amiga. Workbench 1.2 devices are first explained, and in the next chapter, Workbench 1.3 commands, devices, and the new FastFileSystem are expanded on.

The disk drives, RAM drive, Parallel, Serial, Printer, Console and Raw devices are all described under the 1.2 section, and under 1.3, NewCon, RAD, Pipe, Speak and Aux are explained. Also, Workbench 1.3 commands are supported in Avail, FF, Lock, NewShell, Remrad, Resident, SetPatch, Setenv and IconX.

Now that the user has an understanding of the commands and the devices of the machine, the CLI is described. There are many tricks to working with the CLI that make life much easier, such as redirection, that many users never realise even exist. *AmigaDOS Inside & Out* encases all of these, and then moves on to creating script files, using Workbench 1.3, using multitasking, and the more technical side of the Amiga in the DOS library, and how to control tasks.

To top off all of this excellence, the last chapter and appendix are quick reference sections for keystrokes used in the CLI, Ed, EDIT and each command. The high standard of this book is reflected in the easy reading it is, and the fact that the reader has immediate and complete understanding of the subject.

AmigaDOS Inside & Out is for all Amiga owners. It explains in detail all the essentials of 1.3 for those who never read the manual, and then goes on to describe the intricate detail of the new system. Highly Recommended for every Amiga owner.

Amiga Disk Drives Inside & Out

Described as "The most thorough coverage of Amiga Disk Drives ever", *Amiga Disk Drives* is just that. Not a thing is left out, although some of the programs are a little disappointing as they will only run with certain DOS versions.

Starting with the Workbench, the book describes the interaction WB has with the drives, how to copy files, and general tricks and tips for using WB with the drives. It then moves on to the CLI and explains the CLI's capabilities, and all of the major disk-based commands in the CLI environment.

Install, Info, Protect, DiskDoctor, Addbuffers, Path, Diskchange and Assign are all explained, as well as CLI tricks and tips, and several other commands including the interactive mode of DIR. If you don't know what that is, you need this book!

AmigaBASIC is covered in chapter four extremely well, with all the various ways of saving programs expanded on. File type available to the programmer are much easier to understand in *Amiga Disk Drives* than the AmigaBASIC Manual, and a complete list-manager is presented. If you wish to use the programs, you will either have to type them in (not recommended), or buy the program disk from Pactronics or your local dealer.

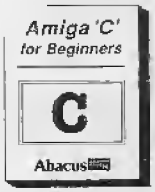
The internal organisation of AmigaDOS and its environment variables are discussed in chapter five, while chapter six describes the layout of a disk with all the various blocks and checksums and how they are calculated. If you're into changing things the hard way, or you need to investigate how to copy-protect your software, this would probably be a good chapter to read.

All the various stages of data processing and storage are well covered, with a program presented that speeds up disk access. However, it will only work with Kickstart version 33.192, and I have version 33.180. I have not tried the program, as the disk wasn't available for review, but hopefully it would be a help to users with the right Kickstart.

The other programs included are the Disk monitor (64 style), and the Deepcopy program, which also sounds good.

As well as all of the above, viruses, and accessing the disk without using DOS is covered, to give one of the best books around for the AmigaDOS user who wants to do a bit of fiddling and improving. Once again, an excellent book, but only for those who like to dabble in any sort of programming.

Amiga C for Beginners



At last, a book for the budding BASIC programmer who wants to move to compiled C. This book should be given an award for its down to earth approach and the fact that it describes how to compile the example program using Lattice and Manx C.

All the fundamentals of C are described, and although I have learned these from other books on C, *Amiga C for Beginners* injects a fresh approach, and looks at the whole language from the Amiga's and the compiler's viewpoints, making life much easier. The major assumptions of C are explained, and how the compiler expects things, so that writing a program is much easier.

Functions, arrays, loops, pointers, addresses, storage classes and important concepts are all covered admirably, all with very good examples and tight programming - not many of the programs presented waste time.

Once the C language as applicable to the Amiga is described, the Amiga from the viewpoint of C is discussed. Everything from tricks and tips to passing data with the CLI, programming the system and general compiler instructions are included (great for those who don't fancy reading the 200 page Manx C instruction book).

Once again, *Amiga C for Beginners* is of the highest standard, worthy of a place in any BASIC programmer's library. Everything you need to know is discussed; you'll be programming in no time. *Amiga C for Beginners* is a real boon for Amiga programming, as it is of the standard that I have come to expect from Abacus. ❑

Review copies courtesy Pactronics (02) 407 0261. RRP *AmigaDOS Inside & Out* $49.95; *Amiga Disk Drives: Inside & Out* $49.95; and *Amiga C for Beginners* $49.95.

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Hints and Tips

(reprinted with permission from MEGADISC)

by Tim Strachan

Virus update

● Various new viruses have been reported, including the "Lamer-Exterminator" said to originate in Oz; the "Blackforce" virus from France; and so on. There is also:

IRQ

● The "IRQ" virus is said to attach itself to the DIR command - it attaches itself to memory by taking over the OldOpenLibrary() vector, and adds a KickTagPtr - so if any program uses that vector the virus will open your startup-sequence - it picks the first executable filename (ie, program) it sees, and writes itself into the file.

If the first filename is not executable, it will try to write to the DIR command on the disk. It doesn't seem to do anything harmful, but is said to change the title bar of your initial CLI window and will try to write to any disk inserted, prompting system requests about the volume being write-protected when necessary: a good way to detect it, since there should be no reason normally to write to a disk, unless you deliberately want to.

It is also said to guru under Kickstart 1.3, and its other features are that it encrypts its text component, so you can't do a search for a particular text string. This virus tells you it's present so it's no big deal. The problem is with the inevitable imitators making it increasingly destructive.

Killing the IRQ virus

● To check for the IRQ Virus, use Jon Potter's program POPDIR in Megadisc 10, or pick version 7.0 of the Alliance Anti-Virus Pack from Prime Artifax on (02) 817-0011. In POPDIR - when you double-click it, you'll see a small window with a lot of gadgets, including IRQ. Clicking on this, once you've selected or typed in a directory to list, will both list the contents of the directory and check for the IRQ.

Check out the latest update of Nic Wilson's NOVIRUS program, which lists those viruses that are checked for specifically. Note that Nic tells us that even if a virus is not specifically named and checked for in his program, it will automatically warn you if ANY non-standard boot block is on a disk, so the protection is there for you.

And if you come up with any new virus (or suspect it to be one) send it on disk to Nic whose address is in the NOVIRUS program and docs. As we've said before, the price of data integrity is eternal vigilance, so regularly check your disks, and check any disk that comes your way before using it.

It's worth noting that various companies are putting out commercial Virus checkers for $50 or more, and they do a lot less for you than Nic's NOVIRUS, which apart from keeping you protected, allows extras such as SAVING and RESTORING boot blocks; SYSing or NOTSYSing a disk (i.e. enabling or disabling fast memory from a bootblock) and more.

Possible POPCLI virus?

● Reportedly, an Amiga user got a copy of the PD raytracing program DBW-RENDER, with a version of Popcli on it, infected with an unpleasant time bomb/trojan horse type virus, said to be capable of writing to the bootblock of any write-enabled disk. It sits in memory for a while, then hangs the Amiga. Note that Popcli allows you to include any DOS command in its command line, such as popping up a new cli of the size and name you want, or anything for that matter.

So be careful, and use Nic Wilson's NOVIRUS on this disk. Incidentally, if you want POPCLI IV then get our DISTILLERY disk, which just turned up from the Software Distillery in the US with a bunch of other utilities as well.

B2000 Screen "FUZZ" Removal Hack

● It seems that ferrite beads have been placed on the video lines (PINS 3, 4, 5 - R, G, B). The beads are used to remove R.F.output/interference caused by the Amiga. These beads have very bad high frequency response thus they act as a filter or dampener to the high frequency elements of the video signal. By removing the 3 ferrite beads and replacing them with components able to pass the high frequency signal through without loss, such as a small piece of wire, the picture is improved greatly.

Connecting other monitors

● Some monitors have problems with the screen synchronising with the video output of the 500 and 2000 (Sony, for example). This is because the output of the video gate-array is too high for these monitors - 4 or 5 volts instead of 1 volt. It seems that you can solve this problem by inserting a 390 ohm resistor into the sync-signal lines of the video cable from pins 11 and 12.

A2000 real-time clock adjustment

● Take the top off the 2000, look for the coprocessor slot, next to the disk and power supply assembly. Looking at the front end of it, you'll see a small trimmer capacitor - turning this counter-clockwise makes it run slower. The best way to calibrate it is to use trial and error, unless you can find a jeweler's watch calibrator.

Keyboards and keymaps for the various Amigas

● There are six different keyboards manufactured for the Amiga range since its inception:

- A500
- A1000
- A1000/Euro
- A2000/Cherry keyboard
  (Left Amiga key has a red "A")
- A2000/Hi-Tek keyboard
  (Left Amiga key has a black"C=")
- A2000/Mitsumi KEYBOARD
  (Left Amiga key has a black "A")

The Mitsumi and Hitek keyboards have a tendency to lose the very first keystroke after power-up - this can be fixed by cutting the capacitors:

- C910 & C911 (A2000 B-board)
- C42 & C43 (A2000 A-board) on the mother board of the A2000.

There are also 2 basic configurations, that for the 1000, and the other for the 500/2000. KEYMAPS (what keys are mapped to what characters) were originally handled by the CONSOLE.DEVICE. Then the "Euro" 1000 (ie the PAL machine) had the KEYMAP.RESOURCE and the SETMAP tool to change the various disk versions in the devs/keymaps directory.

The keymaps are named after the same conventions governing number plates - hence, "gb" for Great Britain, etc. For non-US Amigas, it's worth copying the old 1.2 keymaps to the new Workbench releases, unless of course you want the automatic USA1 keymap.

Enhanced chip set

● This set of 3 chips (Denise, Fat Agnes and Gary) will be available as an upgrade for 500s and 2000s. It will support all current video modes, colour and resolutions as well as a new non-interlaced mode of 640 X 512 ("SUPERHIRES"), 4 colours from 64.

It also extends the addressable CHIP memory to one Megabyte (with the current pin-outs - perhaps 2 Megabytes in a future machine), provide larger "blits" and the video mode is switchable from PAL to NTSC, meaning that US owners will get a full PAL display, by software. To use the new chip set, you'll need the 1.4 system software as well as a BISYNC or MULTISYNCmonitor (ie, a 31.5 kHz Monitor). The new features are achieved by changes in both AGNES and DENISE.

Info on AmigaDos disk structure/file management

● The 1760 blocks on a 3.5" disk (512Bytes each) are divided into the following types:

- .Bootsector
- Rootblock
- Directory-blocks
- Fileheader-blocks
- Fileextension-blocks
- Datablocks

BootSectors are always on sector 0 and 1. These are on everyAmigaDos disk and are read while booting up the system if the disk is bootable. Then there will be a program executed. The Rootblock (Sector 880) holds the diskname, creationdate, etc.. And the Hash chart with 72 entries with pointers for all files/directories that are located on the Root Directory. These entries are sorted by the Hash-Algorithmus. The file/directory name is used for this. If it has a Directory name, then the pointer points to the Directoryblock, which is set up similar to the rootblock.

If it is a File entry then the pointer points to a file header block. Not all entries in the chart must be occupied. That is why a pointer of "0" is interpreted as blank entry. It is possible that there is

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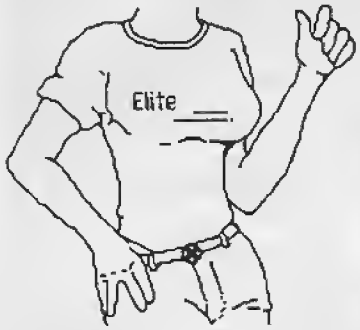

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.....

Address.....

.....

.....

Postcode .....

Size: small ❑
medium ❑
large ❑

Computer: C64/C128 ❑
Amiga ❑

★★★★★★★★★

more than one entry occupy the same place on the Hash chart. These collisions are solved in a way that the needed header blocks are chained in a linear list by a certain pointer.

The Fileheaderblocks again have another chart also with 72 entries with pointers to Datablocks that belong to the certain file. If a file needs more then 72 entries, a chain of Fileexstensionblocks is constructed. These again can have 72 entries.

Also is it important to know that the Amiga Disk I/O is track Oriented. That means if the head starts to read a track, it reads all the sectors of this Track automatically and saves in ram until it reads the whole track, and the read/write head leaves the track completely.This is an advantage if the physical Positioning of the blocks on the disk is done.

These are the possibilities to optimize the diskstructure.

● The physical order of the Files/Directories on the disk is written in the same order of the Hash chart. Because the DIR command goes along the Hash chart the listing of directories is going to be accelerated. The Validation time is shortened as well.

● To place fileheaderblocks there are always two possibilities:

● you group all the headerblocks near the RootBlock (which accelerates the reading of directories), or you place all the Datablocks right behind the headerblocks. (The headerblocks are now all over the disk, but loading of files is going to be accelerated.

● For Directoryheader there are similar possibilities. For fastdirectories it is better to group inside the Fileheaderblocks. For Faster loading of files it is better to place Directoryheader inside the Roottrack. Usually there is enough room to place all the directory headers there.

As you see, there are advantages and disadvantages to both methods. For that reason a little of both methods is supported by some disk speed-up programs, depending on what you want, fast directories (Datadisks) or to load a program faster (Workbench disks). See info on Megadisc9 re "BAD" (BlitzADisk), and there is another program called FASTDISKwhich reorganises your disks in a similar way, ie trying to optimise.

Maximising your Amiga's speed

A few suggestions:

● Don't use ADDBUFFERS, although 1.3 has improved it - the memory it uses for its "cache-ing" comes only from CHIP memory, not from FAST - quite a waste of CHIP memory.

● DO invest in extra memory, certainly at least the A501 half-meg for the 500, and another megabyte if your pocket will run to that - 1.5 or 2 megabytes of memory will make your Amiga purr, and allow you to use some of the techniques below for greater speed.

● DO use some kind of disk-cacheing/buffering - we use FACCII by ASDG (available at any good dealer), but you can also use BLITZDISK from MICROSMITHS (the TxED and ARP people). However, get V. 1.2 of this program because previous versions don't work well with FFS on hard disks with DOS1.3.

If you have the Ram to spare, FACCII can speed up floppy access by a factor of 5 or 6, well worth it, and quite a saving on the disk grinding of normal DOS without buffering.

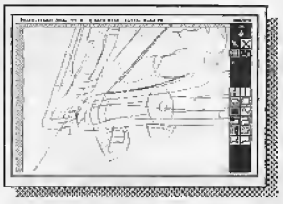
● DO use a Recoverable Ram Disk (RRD) such as RAD: in DOS1.3, or the previously available public domain RRDs, ie, VD0: from ASDG (again); or VDK: as included on Megadisc6. Note that the advantage of the public domain versions is that they resize themselves according to what is put in them, like the system's RAM DISK - whereas RAD: in 1.3 has a fixed size which you determine by the HIGHCYL value you put in your MOUNTLIST. A value of 79 will give you about 880KBytes, so you can decrease it proportionally (and put less into it).

● DO use the RESIDENT command in 1.3 to keep resident in memory those commands which you often use - although if you've set up a RRD with the commands you want in it, the improvement will be minimal if anything at all.

● And maybe learn how to touch type! Definitely worth it in these keyboard-intensive days.

Professional Draw

by George Kimpton



Are you tired of jaggies in your graphic printout? After reading the advertisments for Professional Draw it may seem the answer to your dreams. Maybe. I often wonder do the ad men ever try the products they write up in such glowing terms.

Those of us who like to dabble in graphic drawing and painting are generally well catered for with *Deluxe Paint* and *Photon Paint*. We can produce fantastic pictures, with a bit of luck, on screen that make PC users drool and race for the Amiga dealers. The quality and complexity of art or drawings that can be produced on an Amiga can be mind-boggling to the uninitiated and sometimes even to those of us familiar with it.

However when we enlarge or print out bit-mapped graphics these programs have one serious limitation - jaggies. As a result graphic dot matrix printouts often lack that professional polish for reports and other presentations, appearing rough and amateurish.

So how do we get over this problem?

If you have used Aegis *Draw Plus* or similar CAD programs, you will have noticed a distinct lack of jaggies particularly on diagonals and curves. Scaling or enlarging an object still leaves you with clean lines and text retains its smooth outline regardless of magnification. This is typical of structured drawing techniques in *Draw Plus* and other CAD programs. *Professional Draw* similarly uses the structural drawing approach to art work. If you have experimented with *Professional Page* or the newcomer PageStream, like I have, you will be familiar with the operating system even though the display is different. *Professional Draw* was created as the art companion to Professional Page V1.2 and consequently uses some of same tools with extras thrown in for drawing and manipulating the artwork. PageStream, the other top level desk-top publishing program, uses the same approach to artwork but is not compatible with *Professional Draw* nor are earlier versions of *Professional Page*. *Professional Draw* certainly does get rid of the jaggies, giving lovely smooth curves or lines in your drawing printouts, but beware of the dreaded Dribbles. Dribbles are those dags that hang off the junctions of Bezier curves.

Bezier curve tool

Some of the drawing tools and techniques will be familiar to most and the others easily learned. The Bezier curve tool, used for both straight lines and curves, can be the most frustrating tool ever dreamed up for the uninitiated. Somebody up there must want to send artists mad. Instruction in manipulation of the curves leaves much to be desired, leaving me floundering after several attempts to trace a bit-mapped graphic as suggested in the tutorial. It can be a real hair pulling exercise and is best attempted with the den door closed to avoid shocking the family or kicking the cat.

Straight lines are a snack and the first curve is fairly easy except that it often seems to have a mind of its own. The successive curves, when attached to the previous one, definitely have minds of their own, wriggling all over the place and mostly in the wrong direction until you learn the secret.

When adding the second curve to the first the natural inclination is to extend the tangent forward when in fact it should be extended backwards before shaping the curve. The alternative is to draw a series of single curves and group them which is messy. Oh what a tangled web we weave, as they say. Successive curves can also distort the previous line or curve.

Careless manipulation of the Bezier curves results in the Dribbles or stray lines from the curve anchor points. These stray lines are sometimes the source of much frustration, often being impossible to remove even if you delete the curve that created them. Speaking from experience I am certain much practice and patience is necessary to master these curves and remain sane. A Hook tool is provided to attach extra points to lines, curves and boxes, but strangely not to circles. These extra points allow you to distort the selected line, sometimes with startling and unexpected results. To preserve sanity *Professional Draw* allows you to quit these weird effects by hitting the escape key before releasing the mouse button.

Another tool allows you to break these lines at these or the original anchor points, but will not give you control over which line pulls away from the selected points, sometimes with frustrating results. With a freehand drawing great difficulty can be experienced in modifying shapes with these tools because of the closeness and multiplicity of anchor points on detailed drawings.

Existing shapes or lines can be modified by selecting an anchor point and pulling it to a new location. Unfortunately it is not possible to select multiple points unless you break the line and then select it as an object, which can get you into all sorts of trouble when colour filling.

Extended grouping is available for moving complex objects. Once grouped the new object can be moved, cloned, rotated, sized, distorted or mirrored.

Line weight, pattern and colour can be selected and changed as needed and it is possible to create your own customcharacteristics for individual lines.

One trap here is whether you have selected the Preferences / WYSIWYG mode or not. With WYSIWYG off *Professional Draw* only operates in wire frame mode. The manual recommends switching it off for speed and in this mode assigned attributes, i.e. line weights, will not be displayed on screen. This will lead to more

hair pulling if you forget and are in the wrong mode.

Colour fill can cause problems if the area to be filled is made up of several bounding lines which have not been grouped. This is so particularly if there is a curved common boundary with a different colour. The fill tends to create a straight line boundary between anchor points in the most unexpected ways unless extreme care is taken in selecting bounds. I still cannot fathom how the clip art of the two hands supplied on the Art Disk was coloured. To me it defies explanation.

Draw provides an initial palette of six grey levels plus black and white. In addition up to 127 colours can be defined, either with RGB sliders or by typing in RGB proportions. It is possible to save palettes in colour files for recall.

Importing coloured bitmap graphics can be a bit disappointing as they are displayed as four level grey pictures on the screen. However all colour information is supposed to be retained for printout purposes. I haven't tried this yet so I don't know how good the colour reproduction will be in the printout. *Professional Draw* will handle bit maps up to 1008 by 1024 pixels in any resolution mode and from 2 to 4096 colours including the HAM mode.

Text

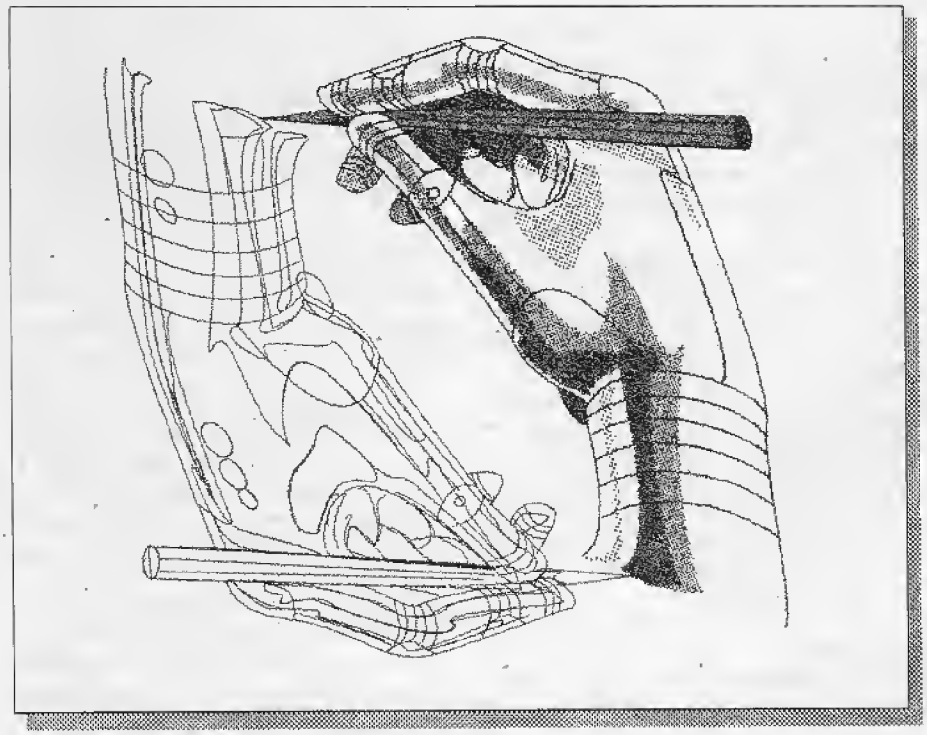
Text is also in the structured drawing format, allowing it to be modified on screen or scaled to suit. Each letter is in an outline format, allowing it to be filled with a selected colour. Two fonts, Times and Universal in serif and sans serif are available.

Text entry is limited to 256 characters at a time and is not intended as a text layout facility but for use in headlines and labelling.

Don't be shocked when the text first appears on screen as, when selected, all anchor points for each letter are displayed. Text can be moved as an object group. Unfortunately text style is always normal with no provision for Italic or Underline. Layering or overlapping text on object or object on object is possible.

A wide range of keyboard equivalents are available for menus or requesters and keyboard constraints on various drawing actions are provided.

After you have survived the experience of producing your first artwork on screen you can output it to either dot matrix or Postscript printers. I must admit the printout on a Star NL-10 dot matrix printer which has only 9 pins is good, taking 3 minutes in grey shades. However, in colour, on a Hewlett Packard Paintjet, which is normally fast, the printout time for a single PAL screen was 10 minutes but still very good.



Problems

To sum up, while *Professional Draw* certainly produces jaggie free drawings and nice clean dot matrix printouts, it has many shortcomings in my opinion. The main problem to all those who buy it to use with *Professional Page V1.1*, which most people have, is that it doesn't work.

It is designed for version 1.2 which presumably has been modified to suit its oddball file format. Still you can at least print out the artwork on its own.

Apart from this it is sadly lacking an Undo or Erase facility for mistakes or those messy bits sometimes left behind on screen. There is also a need to be able to select more than one anchor point at a time for adjusting shape outlines.

Then there is the mystery of the circles or ellipses that defy modification and the anchor points that disappear leaving holes in the artwork when deselected. Refreshing the screen does bring the missing pieces back but this should not be necessary every time you deselect an object.

Fills cannot be graduated to indicate shape, depth or shade and it would be nice to have some more fonts available.

To be honest, putting aside the difficulty with the Bezier curves, the *Professional Draw* program is nowhere near as polished as *Professional Page*. It smacks of a hastily released effort to meet a deadline especially with regard to the lack of compatibility with *Professional Page V1.1*.

One feels that a major upgrade must be in the pipeline or it will be rapidly outclassed by future releases from other software houses. ❑

Parser for the Commodore 128

by David Williams

The parser is the part of an adventure game that analyses what you have typed in for your command. What follows is a parser written in BASIC 7.0 for the Commodore 128, although it could be easily modified for the 64. Lines 2000 and 2010 are provided just to demonstrate.

This parser allows complex sentences to be typed in. More than one command may be entered per line, provided they are separated by a full stop or comma, or the word 'and' or the word 'then'. 'It' may also be used to refer to the last object. For example, 'Throw the nasty knife then get it'.

If the parser cannot understand the input it goes to line 300. The word it was last trying to analyse is contained in the variable wd$. Upon exit in line 280 (currently to line 2010) the variable C holds the number of commands in the input, and the A$ array is as follows:

A$(1,1) holds first verb
A$(1,2) holds first adjective
A$(1,3) holds first noun
A$(2,1) holds second verb
..and so on.

If no adjective was supplied then that part of the array will be empty.

The dictionary is contained from lines 310 to 340 in the order fillers, nouns, verbs and adjectives. The number at the beginning of the line is how many of each there are. To add more words these numbers and those in the DIMension statement in line 10 must be updated.

The arrays in the statement are for commands, verbs, adjectives, nouns and fillers respectively. Other variables used are: NF, T, V, A, P, C$, WD$, DV, F, N, VB, NN, AJ, NO, AW$, and I, so these should not contain important information in your program. These are all temporary variables, reset each time the parser is used, except for NF, T, V and A. In the listing J and K are also used in line 2010.

When the program is run the dictionary is first read into the arrays, and a jump is made to line 2000, from line 30. This is where you should start your program.

```
10 dim a$(10,3),v$(23),d$(10),n$(18),f$(5)
20 read nf:for i=1to nf:read f$(i):next
:read t:for i=1to t:read n$(i):next :read
v:for i=1to v:read v$(i):next :read a:for
i=1to a:read d$(i):next
30 goto 2000
40 if mid$(c$,p,1) <>" "then return :else
p=p+1:goto 40
50 wd$=""
60 if p>len(c$) then return :else if mid$
(c$,p,1) <"a"or mid$(c$,p,1) >"z"then
return :else wd$=wd$+mid$(c$,p,1)
:p=p+1:goto 60
70 dv=.:if wd$="and"or wd$="then"then
dv=1:return :else return
80 f=.:n=.
90 n=n+1:if wd$=f$(n)then f=1
100 if f=.and n<nfthen 90:else return
110 vb=.:n=.120 n=n+1:if wd$=v$(n)then
vb=1
130 if vb=.and n<vthen 120:else return
140 nn=.:n=.
150 n=n+1:if wd$=n$(n)then nn=1
160 if nn=.and n<tthen 150:else return
170 aj=.:n=.
180 n=n+1:if wd$=d$(n)then aj=1
190 if aj=.and n<athen 180:else return
200 gosub 40:gosub 50:gosub 80:if
f=1then 200:else gosub 70:if dv=1then
200:else gosub 110:if vb=.then
no=1:return
210 a$(c,1)=wd$:return
220 aw$=""
230 gosub 40:gosub 50:gosub 80:if
f=1then 230:else gosub 140:if aw$<>""and
nn=.then no=1:return :else if nn=.then
260:else if wd$<>"it"then 250
240 if c<2or aw$<>""then no=1:return
:else
wd$=a$(c-1,3):aw$=a$(c-1,2)
250 a$(c,2)=aw$:a$(c,3)=wd$:return
260 gosub 170:if aj=.then no=1:return
:else aw$=wd$:goto 230
270 p=1:no=.:c=.
280 c=c+1:gosub 200:if no=1then 300:else
gosub 220:if no=1then 300:else gosub
40:if p>=len(c$) then 2010:else gosub
50:gosub 70:if dv=1then 280
290 if mid$(c$,p,1) ="."or mid$(c$,p,1)
=","then p=p+1:goto 280
300 print :print "i do not understand. i am
stuck at "wd$:return
310 data 5,me,my,the,an,a
320 data 18,it,north,south,east,west,up,
down,door, torch,ladder,key,troll,
dwarf,elf,knife,sword,rock,horse
330 data 23,move,crawl,go,walk,attack,
climb,mount,ascend,descend,dismount,
run,take,get,collect,throw,hurl,drop,
leave,discard,open,close,lock,unlock
340 data 10,red,green,blue,light,heavy,
big,small,nasty, nice,friendly
2000 print :input "what would you like to
do";c$:if c$="quit"then end :else gosub
270:goto 2000
2010 print :print :print"verb     adj
noun":for i=1to c:for j=1to 3:print a$
(i,j);:for k=1to 10-len(a$(i,j)) :print " ";:next
:next :print :next :print :print :return
```

The Parallel RS-232

Direct Connect two Commodore computers via their User Ports

by Anthony Gillan

You may well ask why would you want to connect two computers together? There are fanatics out there who would connect two computers for the sheer pleasure of seeing them 'talk' together. The most common reason for interconnection is to transfer files between two incompatible computers.

If you have a perfectly good Commodore computer lying around because you upgraded to an Amiga, then that old Commodore can still have function if you connect it to the Amiga.

If you connect two similar computers together, a Commodore 128 and 64, the 64 can be used as a printer buffer or purely as an advanced RAM card for the 128.

An advanced application would have a large number of VIC-2Os or Commodore 64s running as slaves or terminals from a single Amiga or Commodore 128 host computer. This networking would be relatively cheap to set up as one disk drive and printer is required to be connected to the host only, and how much are VIC-2Os second-hand? The only problem will be writing the necessary programs to run commercial software.

RS-232 Standards

RS-232 is a computer industry communications standard. The idea behind it was to allow different types of hardware to be connected together by this 'universal' interface. The only problem is that the designers of computer systems seem to want to express their individuality in their 'all-new' system. This desire seems to have been carried through in their interpretation of the RS-232 standard. The result is that 'break-out' boxes and other types of external interfaces are commonly used to overcome these incompatibilities in versions of RS-232.

The User port on the Commodore 64 and 128, and the VIC-2O was designed to allow the the computer to be connected to a host of different computer devices including printers, modems, parallel disk drives, and even other computers. The Commodore version of RS-232 is implemented in the form of the User Port. The differences between it and standard are:

- Commodore RS-232 uses +5 volts as logic level 1 and 0v as logic 0. while standard RS-232 uses -12v as logic 1 and +12v as logic 0.
- Commodore User Port requires a 4mm edge connector while the standard connector is a 25 way D-type connector.

To connect your Commodore to a standard RS-232 device, a modem for example, you will require an interface that overcomes the above problems. Interfaces are available commercially, but various logic chips are available to simplify building your own interface, if you are that way inclined.

Commodore serial RS-232

Commodore owners commonly use the RS-232 User Port to connect a modem to their computer. The simplest connection involves the "3-line" RS-232 interface (fig. 1). This basically involves a Data Transmission line, a Data Received line, and a Ground line being connected between the modem and computer. A modem basically is a special type of interface which allows computers to be connected to each other by way of the telephone lines instead of directly by a simple cable.

When connecting two 64s together the transmitted data line on the first 64 is connected to the received data line on the other 64 and vice versa. The ground lines are connected together. It is best to use a shielded cable instead of individual wires to stop corruption of data sent along these lines. A simple terminal program is all that is required to get these two computers talking.

Other connections with the User Port form the basis of an 'X-line' interface which has allowances for a hardware protocol between the two computers. If one computer is sending data at a faster rate than the other can handle, then data will be lost unless the second computer tells the first to pause. This protocol allows the two computers to communicate so no data will be lost.

A '3-wire' interface can also use a protocol but it has to be implemented by the software controlling the data transfer. In the serial interface only one line can be used for transmitted data and one for received data. The actual electronic data sent along these lines is a logic type, either a 1 or a 0. For Commodore RS-232 these logic signals are physically voltage levels of 5 volts or 0 volts. This amounts to the fact that only binary numbers can be sent along the data lines, effectively only single bits.

For the Commodore 64, which is an 8-bit computer, there are 8 bits in every 'word'. That is, the letter 'A' (one-'word') is stored in bit-form (binary) as '01000001'. For the computer to send this word to another computer via the serial interface, where only individual bits can be sent, each bit comprising that word must be sent one after the other. This is serial data transfer.

If you could send the whole word at once it would be effectively eight times as fast as if you sent it serially, for an 8-bit machine. This method is called parallel data transfer, for each bit in the word is sent at once along different data lines, in 'parallel'. For the newer Commodores, like the Amiga range, each word consists of 16 bits, hence parallel transfer would be 16 times as fast as serial transfer. [For more information on The Serial RS-232 refer to the Commodore Reference Manual (VIC-2O,C64,C128).]

The parallel Commodore RS-232

Read up diligently in the old faithful Commodore 64 Reference Manual about the User Port and RS-232 and all the information needed to connect up your computers together, and write a terminal program is presented in front of you. The 128 manual even gives little basic routines on how to detect an incoming call on the modem. The problem lies in the fact that little is said about parallel data transfer.

To find that 'clue' to the speed of parallel transfer we must look deep into the hardware side of the Commodore computer where we find a 6526 chip called the Complex Interface Adaptor (CIA). There are two of these chips in the Commodore, one handles keyboard and joystick operations, the other handles the serial bus and the user port. These chips control input and output of the computer and its devices. Another 'selling' feature of the chip is 16 individually programmable I/O lines with full handshaking. This means that this chip is capable of handling 16-bit operations and a protocol can be used. This on an 8-bit machine?

For parallel RS-232 operations we are concerned with a few of the chip's features. For the 16-bit operations stated, two Peripheral Data Ports are used. Each port is physically represented by eight pins on the chip.

The catch in the idea of possible 16-bit transfer is quite suddenly halted here. Only one set of eight pins is connected directly to the User Port. These are from Peripheral Data Port B. The other set is split in terms of destination. Five pins connect to three pinouts on the Serial Bus. Only one pin reaches the User Port. The other two are connected to the VIC chip which controls the bank select in the system memory. Try sending data along these pins and you will run into severe problems. (see fig.2).

Connecting up

For 8-bit parallel RS-232 data transfer you will require eight lines of data as only one bit of information can be sent along a data line at once. These lines will correspond to pins C to L on the Commodore User Port (fig.3). Pins 8 and B will be required for handshaking, and pins 1, A, and N are connected for full grounding and shielding of data. A 12-core shielded cable would be best to connect two computers over a fair distance to minimize data corruption. For incompatible computers an interface will be needed as well.

Pins B and 8 on each computer will need to be connected to the alternate pin on the other to produce hardware handshaking during data transfer (fig.5).

Programming for Parallel Transfer

Why did we need to know about the CIA chip?The pinouts we are concerned with on the CIA chip correspond to actual values within the memory of the Commodore called registers. What you actually store in memory is physically realized at the pins on the CIA chip and hence the pins on the User Port. So your Commodore isn't as dead as you thought.

For our 8-bit parallel transfer we are only concerned with two registers in memory, two bytes. One is Peripheral Data Register A which is the byte that contains the data you wish to send or receive. The other is Data Direction Register A which corresponds to the bits in PDRA. If the bit in DDRA is a logical 1, the corresponding bit in PDRA will be sent to the other computer. A logical 0 indicates received data. Commodore 128 programmers will be used to this sort of thing from working with the 80 column chip.

The control software required to run the parallel transfer is as simple as that of serial data transfer. You can adapt software protocols such as Kermit and Xmodem data transfer to parallel use. Basically the data you work with is in PDRA and the direction is in DDRA. How you manipulate the data is up to you. A simple BASIC terminal program is included to demonstrate the use of these two registers for the simplest type of 'talking' between two Commodores. The routine should be written in Machine Code with some form of software protocol and buffering incoming data, like that used by the serial RS-232, to realize the true speed of parallel transfer.

fig.1 Serial RS-232 interfaces

3-Line Interface (standard RS-232)

pin	description		
2	Sout	-	transmitted data
3	Sin	-	received data
7	Gnd	-	Ground (O volts)

X-line Interface (Commodore User)

pin	description		
C	Sin	-	received data
M	Sout	-	transmitted data
B	Sin	-	received data
A	Gnd	-	ground
N	Gnd	-	protective ground

Amiga to 64/128 parallel RS232

If you have an Amiga and a Commodore 64 or 128 and you do not have an interface there is another possible way to transfer files directly between the two computers.

The Parallel Printer Port on the Amiga and the Parallel User Port on the Commodore 64 and 128 are similar in terms of interfacing. The Amiga's port is even controlled by a similar I/O chip called the 8520 CIA. Fig.4 gives a register compatibility between the two computers concerning the said chips. The software method of programming given above directly accesses the chip's registers so the Amiga's device drivers can be bypassed for a time. This possible interface could be cheap and beneficial for someone wishing to send files from his old 64 to his new Amiga, not a permanent stand-alone interface. The moment the Amiga accesses the printer, your interface is history.

References

- Commodore 64 Programmer's Reference Guide; Commodore Business Machines.
- Commodore 128 Programmer's Reference Guide; Bantam Computer Books.
- The Anatomy of a Commodore 64; First Publishing Ltd.

Direct Connections Listings

fig.2 Complex Interface Adaptor chip # 2 pinout

pin	name	line-name	destination/notes
2	PA0	-VA14	VIC memory banking
3	PA1	-VA15	VIC memory banking
4	PA2	PA2	pin M - User Port
5	PA3	ATN OUT	" 9 - User/pin 3 Serial Bus
6	PA4	CLK OUT	" 4 - Serial
7	PA5	DATA OUT	" 5 - Serial
8	PA6	CLK IN	" 4 - Serial
9	PA7	DATA IN	" 5 - Serial
10	PB0	PB0	" C - User
11	PB1	PB1	" D "
12	PB2	PB2	" E "
13	PB3	PB3	" F "
14	PB4	PB4	" H "
15	PB5	PB5	" J "
16	PB6	PB6	" K "
17	PB7	PB7	" L "
18	-PC	PC2	" 8 "
24	-FLAG	-FLAG	" B "

fig.3 User Port Pin-Out

pin	description	notes
1	ground	
2	+5 volts	(1OOmA max)
3	RESET	
4	CNT1	Serial Port Counter from CIA#1
5	SP1	Serial Port from CIA#1
6	CNT2	Serial Port Counter form CIA#2
7	SP2	Serial Port from CIA#2
8	PC2	handshaking line form CIA#2
9	-Serial ATN	device atention on serial bus
10	9VAC +phase	power transformer (5OmA max)
11	9QAC -phase	power transformer
12	ground	
A	ground	
B	-FLAG	handshake input form CIA#2
C	PB0	bit 0 - port B CIA#2
D	PB1	bit 1 - "
E	PB2	bit 2 - "
F	PB3	bit 3 - "
H	PB4	bit 4 - "
J	PB5	bit 5 - "
K	PB6	bit 6 - "
L	PB7	bit 7 - "
M	PA2	I/O line CIA#2 (CB2-VIA)
N	ground	

fig.4 6526 and 852O CIA Memory Registers

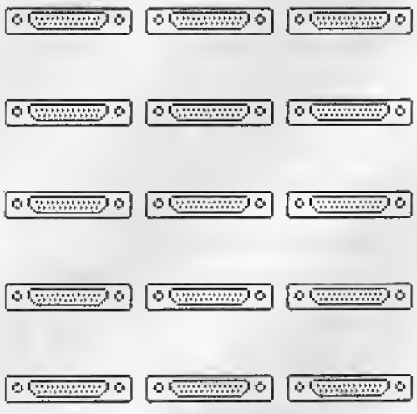
Name	64/128 Address	Amiga Address	Description
PRA	$DDOO	$BFEOO1	Serial Bus / Disk I/O
PRB	$DDO1	$BFE1O1	User Port / Printer
DDRA	$DDO2	$BFE2O1	Data Direction
DDRB	$DDO3	$BFE3O1	Data Direction

fig 5. Cable Wiring

User Port1	Pins	(shielding)	Pins	User Port 2
ground	1	----------	1	ground
+5 Volts	2	--optional--	2	+5 Volts
Handshake	8	--handshake--	B	handshake input
Shake	B	--handshake--	8	handshake output
ground	A	----------	A	ground
no-connect	N	- sh --------	N	protectiveground
8Data Lines	C-L	----------	C-L	8Data Lines

Parts List: 2 x Commodore Edge Connectors
(Cat. PA-0888 Jaycar Electronics)
approx. 1 metre 12-core data cable
(Cat. W-2041 Dick Smith Electronics)

Assembly:
Solder wire as per above connections. Note pin N on user port 2 goes to shielding on cable - whereas pin N on user port 1 is a no connection. Check continuity with an Ohmmeter once complete.
(NB: Do not solder cable or alter wires whilst connected to user port. Never add or remove cable whilst either computer is on!).



Pokes Galore

by Nick Van Heeswyk

Are you wondering what pokes can do for you? Well if you are I've found a few over the years and most of them are rather useful. You can use in your programs or just play around with them. First I'll list the pokes and give a definition of their use after the list.

1- Poke 788,80
2- Poke 788,52
3- Poke 774,0
4- Poke 650,128
5- Poke 773,0
6- Poke 788,55
7- Poke 769,164
8- Poke 769,227
9- Poke 646,c
10- Poke 53272,a
11- Poke 788,93
12- Poke 2048,13
13- Poke 808,234
14- Poke 808,235

Definitions:

1- Enables you to use the cursor keys to draw in blocks like using reverse on and pushing space bar.

2- Use in programs like typing tutors and data bases. This makes the run stop key have no effect if you accidently push it.

3- Use once finished typing in a program. When typed in you cannot see the listing of your program. This is good to use if you need a password. So if someone lists it to find the password they won't find it. Unfortunately I have not found a poke to bring the listing back.

4- All this does is make the key repeat itself by holding down a key.

5- Once this poke is typed in you cannot use the list command. eg if you type in list a syntax error will appear.

6- Makes the cursor flash faster.

7- Prompt messages disappear (like ready). If you list your program a familiar ready will appear. But with the aid of this poke it will not appear.

8- Makes the prompt message reappear.

9- Enables you to control the cursor colour. The c means the number of the colour you want.

10- Used for making your own redefined characters. The a is for the location where you want to store it.

11- This poke stops the cursor from flashing and makes it invisible.

12- After this poke is entered the "RUN" command will fail.

13- Good to use after finishing a program. It makes so you cannot runstop restore programs.

14- This enables you to runstop restore programs.

I hope that you can find some use for some of these pokes, as I certainly have. Don't just sit around, try them in your future programming.

Lost in Space

by Richard Silsby

How would you feel inside a space helmet, gloves and protective suit, strapped tightly inside the sleek body of an Intergalactic Spacecraft.

As the gunner of the spacecraft you wait for the approaching enemy to come into range. After a long wait the radar blips - the target is in your sector and you hurriedly attempt to grasp for the laser direction control and fire button only to find that the mechanics forgot one small detail when they reparred your ship. A broken fire button spring.

To avoid becoming another statistic of the Space Wars, get your hands on a joystick that will go to the farthest depths of space with you.

This month I have been given the Crystal Joystick from the factories of Mister Joysticks. This joystick has a clear base (thus the reason for the name!) which allows you to inspect the inner workings.

The makers have gone to plenty of trouble with the good strong metal micro switches. The grip fits comfortably into most hands, although in time the join down the centre of the grip could come apart and bite the user.

The two fire buttons are located at the front, which makes it inconvenient to do a lot of shooting as you would have to in most shoot 'em ups. I prefer to have either a fire button on the top of the grip or as a trigger in the grip.

The Crystal Joystick is one that you will have to buy several of. When put through its paces, it didn't come up too well. At one important stage in a game the handle came out of its socket.

Overall this isn't a very good joystick and the lack of suction cups just adds to your intergalactic problems. My advice is find a hardier model that will stick with you through thick and thin, don't get lost in space with the Crystal Joystick.

Don't miss out on these great bargains!

Australian Commodore Review - SUITE 64

Disk Magazines Nos 1 to 14

Disk Magazine 1 $10

Forest Raiders : A full arcade game based on the movie Return of the Jedi. Centred around the forest chase. Full machine code shoot'em up.
Revolution : An article about the aftermath of the home computer revolution.
Recover II : This program enables you to unscratch files which you have accidentally scratched.
Bsave.bas :- Saves a block of memory using BASIC poke functions and the normal save command.
Nice Lister : Produced formatted program listings converting hard to read cursor controls, color controls and graphic symbols into expanded exclamations within curly brackets.
Old.bas : Load this one and use it to retrieve a program you accidentally NEWed.
Catalog : Use this when you want to obtain a catalog of your disk directory without losing the program in memory.
Ultra-editor : Enhanced BASIC editor with special commands to make program modification easier.
CHARgraphics : Design a BASIC screen using the normal full screen editor. This program will convert it into line numbers, full instructions included.
Line Transfer : Move a block of BASIC program to a new place.
NEW Reset : Modified cold start routine.**Color Window** : Full machine code routine for displaying a field color box on the screen.
Flash : Flash any area of the screen.
Input : A special program to enable entry of data without the usual problems of the user accidentally clearing the screen or entering illegal characters.
Border : Machine code routine to quick draw a border around any part of the screen.
Paint Demo : A Gpascal program to paint a hi-res screen area.

Disk Magazine 2 $10

ECF : A full demonstration version of the card file program with some limitations on the maximum number of cards. Try before you buy. Full instructions included.
Character Editor : Enables you to design your own custom graphics characters for use in game or other programs. Special boot loader also included.
Wacky.set : An upside down character set for the character editor.
Gothic.set : A gothic character set from the adventure game Underworld of Kin.
Computer.set : A computerish character set designed by Scott Wilcox.
Teleport : A simple terminal program.
3D.ult : An ultra BASIC 3D plotting program.
3D.bas : A standard BASIC 3D plotting program.
3D.sim : A Simon's BASIC plotting program.
Bytes and Bits : A complete tutorial explaining binary, hexadecimal and other computer number forms.

Disk Magazine 3 $10

Construct-brix : A drawing program that works using the joystick enabling you to move different pieces into position to create an entire picture. Full instructions built-in.
Bird Invaders : Machine code shoot'em up.
UDPG : Enables you to print user defined graphics on your printer.
Baspred : A BASIC sprite editor.
Calender : Prints out a calender for almost any year.
Point Square : For mathematics and geometry students.
Hangman : A fun compüter version of this classic game with a good demonstration of character graphics.
Typing Practice : A simple touch typing program.
Labyrinth : A 3 dimensional maze type game.
Finance : Calculates loan repayments and various other costings.
Road Block : A fun multi-player, multi-speed block in your opponent game.

Disk Magazine 4 $10

Graphics Workshop : A suite of design programs for producing graphics characters, sprites, sprite animation, hi-res graphics and split screen effects. Complete with tutorials, fully menu driven.
Typing Tutor : A complete touch typing tutor that automatically works on your weaknesses. A keyboard displayed on screen highlights the key to be pressed encouraging you to touch type correctly. Includes space game for the young at heart.
Directrix : A disk filing system by Paul Blair. Instructions included.
Plurals : Educational program for English students.
Probability : Mathematics program for math students.

Disk Magazine 5 $10

Amiga-Ball : A graphics animation based on the famous bouncing Amiga ball demonstrated during the Amiga's release.
The Porsche : An excellent multi-color hi-res picture.
Max Headroom II :A full screen animation.
Seven-Up : Brilliantly designed effect of a rotating can of Seven-up with accompanying music.
Sprite Database : Maintain a complete database of all your sprites as well as designing new ones and editing old ones. Instructions included.
Newsroom Loader : For MPS 802 and 1526 owners enables you to print Newsroom screens and borders.
Signwriter : Allows you to print a large sign to the MPS 802 or 1526.
Character Saves : Copy and save upper case, lower case or computer character set.
Dump Directory : Print a directory listing of any disk to your printer.
DD SGPrint : Prints a Doodle file to your MPS 802 printer.
PS BGPrint : Print Printshop pictures to your 1525/ MPS 802 printer.
Centronics Driver : This program enables you to use a Centronics printer in conjunction with a centronics cable connected directly to the user port. Such a cable is available as the GEOS cable. Just run the program and you can send any normal print output via the user port with or without ASCII conversion.

Disk Magazine 6 $12

Burt the Bug : Good example of character graphics animation in this fun game of collect the fruit while avoiding the boot.
Hangman : An improved version on our earlier release.
Amiga Pharoah : An Amiga picture ported to the Commodore 64 with some interesting effects and music.
Space Harrier : Music and graphics from the game.
Max Headroom : A still picture of this loveable character.
The Pacer : Brilliant perspective animation in this graphics demonstration with music.
Sade : Synthesized music by the popular artist.
Light Fantastic : An interactive demonstration enabling you to modify various aspects of this hi-res effect.
DirB28 : A compact disk directory program that sits in the cassette buffer.
Disk Filer : Enables you to catalog all your disks into one large file.
Disk Labels : Prints a disk label.
Dual Labeller : Prints two disk labels at a time.
Report One : Enables you to print your disk catalog in five columns based on either program name, ID or just the complete file.
1571 Utility : For Commodore 128 owners.
Home Inventory : Maintains a catalog and value for your entire home inventory. Ideal for insurance purposes.

Disk Magazine 7 $12

Dark Forest : Between one and four players strategy game where you must conquer your opponents by capturing land areas or castles.
Joystick Tester : Double check that your joystick is working in all directions.
Irish Jokes : A collection of humorous one liners from our resident Irish joker.
Dice Roller :Lost the dice to your favourite board game recently? This program will simulate a random two dice throw.
Demonstrations : Karate Kid II, Thrust Concert, 3D demo, Don Martin, No More Heroes, Recursion, Funny, Whizzy, Transputer, Classics, Special.
Ps/Pm/Nr Converter : Exchange graphics between Printshop, Printmaster and Newsroom.
Ps Graph/Epson/CBM : A program to print Printshop graphics on either an Epson, Commodore or other printer.
Chord Maker : For guitar students, define a chord and print it out.
Anti-ISEPIC : Removes ISEPIC front end off snap shotted programs.
The Sledgehammer : Compact BASIC and machine language programs to save disk space.
Fast Format : Format disks on your 1541 in around 20 seconds.
Renumber : Renumber your BASIC programs for readability and space saving.
Graphics Editor :- A complete machine language sprite and character editor by Andrew Crowther.
Sidekick v3.C :A huge array of DOS utilities and generally helpful programs.
Home Finance : For helping manage your home budget.
Oscilloscope :Use in conjunction with the interface designed by Andrew Baines to produce an oscilloscope display on your screen.
Ultimate Writer :- Send musically accompanied letters with redefined characters to your friends.
C64/128 Boot Maker :- Enables you to boot a 64 disk from 128 mode.
Convert BASICs :- Converts from BASIC two and four to BASIC seven on the 128. The program will read a specified file from disk then print a display of all unknown key words and line numbers that use PEEK, POKE, SYS, WAIT and USR. Output can go to the screen or a printer.

Disk Magazine 8 $12

T & S Spreadsheet :- A full machine language track and sector editor for hackers and programmers.
Function Keys :- Enables you to define the Commodores eight function keys to a meaningful command.
Unscratch :- Undelete programs you have deleted.
Relocatable DIR :- A small program to retrieve a disk directory which may be placed anywhere in memory.
Tape Header Modifier :- Enables you to rename tape files.
Enterprise II :- Several hi-res pictures accompanied by interesting musical arrangements.
Eddie Demo :- Theme from the movie Beverley Hills Cop.
Games :- Full machine code shoot'em up.
ESCOS V2.99 :- Allows you to snapshot part of any graphics picture and produce a full screen display using 112 sprites.
Newsroom Camera :- Snapshot part of any hi-res graphic to produce Newsroom clip art.

Calendars :- An improved program to produce a calender for any year.
Cheque Writer :- Fill in the details and print a professional looking cheque on the Westpac standard small size choque.
Clock :- A special clock which is displayed in the border.
Future Writer :- A full blown hackers word processor for sending musical messages using a variety of type faces.

Disk Magazine 9 $12

Disk Tidier :- Enables you to modify the order of your directory listing.
Menu Maker :- A simple boot loader for the front end of your own disks.
Doctor 64 :- Is your computer looking a little off color? This program passes a test through all the main devices selectable from a icon driven menu.
Sprites in the Border :- From our December 1987 issue demonstrating how to use sprites in the border this program enables you to edit your own message and display it scrolling in the border.
Sprite Clock :- The complete clock in the border program by Andrew Baines.
Metric Converter :- 22 conversions from Imperial to Metric and reverse.
Stock Market :- An educational game.
Star Trek :- For all Trekkie fans here is an original version of that famous game.
Little Invoicer :- As appearing in the December 1987 edition this program enables you to run a basic invoicing system.
Demonstrations : Alf, The Trap Demo, Future Shock, Pure Genius, DNA, XESS 1-Rendezvous, FTL Demo, Weird One II, Taurus II, Real Real Thing, Sights and Sound, Crazy Sample I, Brick Wall, Incredible, Drive Music, Get Funky.

Disk Magazine 10 $12.95

- Features ADOS Menu System
Diary - Version One of our Appointment Manager System. Both the compiled and BASIC version are included.
Depreciation :- Educational program for demonstrating and calculating the process of depreciation using three commonly used methods.
Define Function Keys :- Yet another function key definition program. This one is particularly easy to use.
Hamlet :- A good version of the popular game Othello.
Cup Challenge :- A two player only using two joysticks sailing simulation.
Star Gunner :- Shoot'em up perspective view.
Chemistry :- Features the chemical symbols of the periodic table. Ideal for year 8 and 9 students.
Music 64 :- A full featured music editing program written in compiled BASIC.
Print Sheet Music :- Enables you to print out sheet music on your printer in case you run out of the real stuff.
Slide Show :- A brief selection of impressive graphics.
Demonstrations : Amiga Memories, Beyond 2, Border Screen, Hero, Knight Games Music, Madonna Demo, The Working 64, Watch the Eye, ESCOS I, ESCOS with Music, Sting, Bards Tale.

Disk Magazine 11 $12.95

80 Characters :- A special driver enabling the display of 80 columns of text. Useful for your own BASIC programs.
Graphic Converter :- Transfer pictures between a variety of formats.
Line Number Deleter :- Allows you to perform block deletes from BASIC.
Function Keys :- Here is yet another function key program.
System Locater :- Helps you find the SYS call to start a machine language program.
Fixed Directory :- Will reconstruct some disk corruption problems.
Disk Searcher :- Just enter the text that you are looking for and this program will try to locate it on your disk.
Disk Tidier :- Batch program deletion.
1541 Drive Alignment :- A quick utility which promises to align your disk drive - untested.
Disk Doctor :- Another program for reconstructing corrupt disks.
Hi-res Jigsaw :- This fun program lets you pick a picture and then it rearranges it into small blocks. Use the joystick to try and reconstruct the image.
Equation Manipulation :- Teaches the rules of equation manipulation. Helpful drill section.
Linear Equations :- Teaching and drill educational program.
Probability Demonstration
Printer Drivers :- Side Two of this disk contains a long list of printer drivers for GEOS including the 1526/ MPS 802 and many others.

Disk Magazine 12 $12.95

Appointment Manager V1.2 :- Updated from Issue Ten, now with search and print options.
Third Term 1.0 :- A fully menu driven terminal program.
Panes :- Based on the July Issue, 1988 of ACR, this program allows you to produce simple windows and menus. Written by Andrew Baines.
Atlantis :- A fast shoot'em up where you are a fish underwater. Excellent graphics, lots of levels.
Circle Navigation :- Calculates the distance between any two points on the globe.
Slope and Intercept :- Teaches the formulae involved for working out gradient, x and y intercepts. Full instructions included.
Music :- A selection of three music compositions by Eric Holroyd which you may include in your own programs.
GEOS Upgrade :- Side two contains a number of files which you should copy to a GEOS disk in order to upgrade to Version 1.3
Educational Programs : Portfolio, Balance, Investment, Bonds. All have built-in instructions.
Time Crystal :- An interactive graphic demonstration by Jim Sachs. One of the masters of Commodore 64's graphic capabilities. This was the beginnings of a game which he never completed.

Disk Magazine 13 $12.95

Charles - a huge graphics adventure with animation. You are Charles and must locate the missing computer and return it. Joystick control enables you to travel over 390 screens during five levels. It maintains high scores.
Stowaway - a text adventure by Base Seven Software. You are a stowaway on a ship - can you escape?
Blackjack - Play the computer at this favourite card game.
VCR Index - keep a file of all your favourite video cassette recordings, tapes or records.
Graphic Converter - An invaluable utility that enables you to transfer clip art type graphics from Printshop, Printmaster, Stop Press and even future programs to other formats. You can also convert between various picture types such as Blazing Saddles, Koala Painter, Art Studio, Image System, Artist 64 and others.
Disk Diskassy - The best disk utility ever written for the C64. It's in full machine code and includes a BAM editor, Directory Editor, Sector Editor, Index Maker and Menu Creator. All menu driven, very easy to use. Ideal for programmer and hobbyist.
Disk Label Maker - Print one or two sided labels complete with a directory of what's on the disk or customise your own entries to either an Epson FX or MPS801/803 printer.
Icon Changer (GEOS) - This program will let you edit them to your own design.
Easy DOS - A quick little program for obtaining a directory, scratching or unscratching files, renaming programs or changing your disk header.
Cruncher BASIC - Pushed for memory? This program will in seven parcels compact your program as much as possible by compounding statements onto one line.
Calc - A simplistic spreadsheet type program which is currently tape based but may be modified to save data to your disk drive.
Font Diskassy - A character editor that also lets you create pictures by combining characters together.
Graphic Demonstrations - A selection of pictures and music from hackers and artists around the world.
PLUS various other short utilities and fun programs.

Disk Magazine 14 $12.95

Electronic Cad Package - Design electronic circuits using two sets of predefined component symbols, alternatively define your own symbols. Use for any architectural or planning application.
Software Cataloguer - Keep track of all your favourite programs, which disk they are on and the type of file. Sorts and prints.
Character Thief - Extract redefined character sets from commercial games for your own personal use.
Pointer C64 - Give your C64 an Amiga pointer. This amazing function is accessible from BASIC with examples of use included.
Best single disk file copier - An easy to use program for moving files around your disk. Collection allows wild cards format from program and multiple copies.
Never ending scroll - Edit and design your own message scrolling across the screen in a variety of colours with optional flashing and at whatever speed you require. Saves to a machine code program which can be run. Works from IRQ.
SEQ file reader - Enables you to view sequential files such as those produced by Easy Script on screen.
CompuPage - A fun game for up to four players. Based on the popular board game Pay Day. And lots of demos.

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Adventurer's Realm

by Michael Spiteri

Hello adventurers, welcome to Australia's only column for adventure and strategy players who ponder on Commodore 64's and Amigas.

Mail has been literally pouring into the Realm by the hundreds - well beyond what I can handle, so please be patient when waiting for a reply. This month I've used the space in the Realm to give you many brief reviews of adventures that have been released only just recently, and Kamikaze Andy has reviewed Infocom's latest offering.

Realm's Mailing Dept

Stuck? Helpful? Chatty? You can write to me concerning anything to do with adventure games, or to Barry Bolitho for your wargame queries. Not forgetting Kamikaze Andy for all your role-playing game queries. Always enclose a stamped addressed envelope, just in case we can reply to you. Write to:

Adventurers Realm: 1/10 Rhoden Court,
Nth Dandenong Vic 3175 - for adventure queries

Wargame Dept:1/10 Rhoden Court,
Nth Dandenong, Vic 3175 - for wargame queries

Andy's Dungeon: 44 Hawkesbury Drive,
Willeton, WA 6155 - for role-playing game queries

Free hint sheets

All the following hint sheets are free, but because of the great demand for them, there is a limit of four different hint sheets per person - so choose carefully. Kamikaze Andy does NOT have any hint sheets, so don't write to him asking for any!

Make sure you enclose a stamped addressed envelope that would easily contain the hint sheets you require.

- Zork 1,2,3
- Bards Tale 1,2,3
- Dracula 1,2,3
- NeverEnding Story
- Hitchhikers Guide
- Adventureland
- Borrowed Time
- Hampstead
- The Pawn
- The Hobbit
- Lord of the Rings
- Castle of Terror
- Pirate Adventure
- Fairy Tale
- Deja Vu

W·I·L·L·O·W

by Michael Spiteri

Willow (for those of you who don't know), is the name of a recent fantasy and adventure movie recently seen on the big screen. It tells the story of three heroes, each with the same goal of overthrowing the leadership of the evil Queen Bavmorda.

Well, it doesn't take long for movies with interesting enough plots to be turned into computer games, and Mindscape seem to be the suitable company to do the job, *Willow* being another one of their highly graphical Lucasfilm games.

Willow is actually six games in one, five of which can be played in practice mode. Once the game loads, and the title flashes around for a little while, a scrolling scroll (what's a scroll if it doesn't scroll!?), which basically gives you a detailed account of the entire story of *Willow*. By using your mouse, joystick or keyboard (you should have at least two of those!), you can select what game you want to play by pointing the pointer wand onto bold parts of the scroll. Or, you can choose to play the whole movie from game one, through to the Final Battle, game six. The scroll is pretty well done graphic wise, and also provides some interesting reading. The music isn't too bad either!

The first game on the list gets you playing the role of Ethna who is trying to escape with the baby Elora Danan (the first hero, who has to survive if old Queenie is to get what's coming to her) from the dark dungeons of Nockmaar Castle. This is basically another clever looking 3D-maze game. All you do is point to the direction you want to go, and pray that a

prison cell isn't there (the door ALWAYS slams shut behind you), or an ugly looking guard (who, I must add, is depicted in full colour and animation) will sort of capture you, abruptly ending the game.

Luck is the major factor when playing this level. I would have liked to have been given the chance of avoiding or fighting the guard, but I suppose you can't expect a woman carrying a baby to start doing karate. Anyhow once you've played this section a few times it becomes a breeze, even if the loading time at the start takes ages.

Then you take the role of Willow Ugfood (and I always thought the movie was named after a magical tree), the farmer turned hero, as he journeys through the woods to get to the Daikini crossroads. This game looks very much like *Faery Tale Adventure* in its graphics and format. You travel in all directions trying to avoid the Death Dogs and the Nockmaar Troops. Willow is armed with three acorns that turn things into stone. More of these acorns can be found lying around if you look closely. I suggest you use a joystick in this section, as the mouse can be a bit awkward to use.

When you get to the crossroads, you then have to choose which gate holds hero number three, Madmartigan the warrior. Well, you have a fifty/fifty chance of succeeding, so choose carefully.

From the crossroads to Spellcasting, a game which has to be played three times. You have to use your magic spells to convert a good sorceress, Fin Raziel, from a horrible beastie to a nicer human. Another game of chance as you must select the three correct spells from a selection of thirteen.

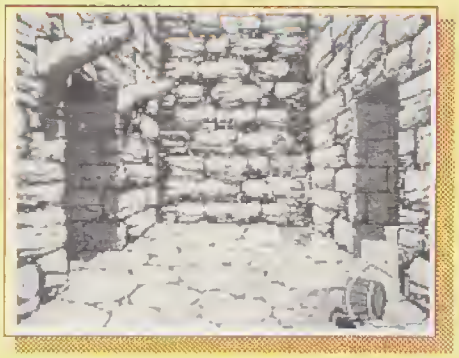
Ice Caves are next. You must negotiate through a twisting network of tunnels. This is a very fast moving game, so a joystick is a must. Another pretty maze game, which requires skill rather than the luck which was required in the Dungeons.

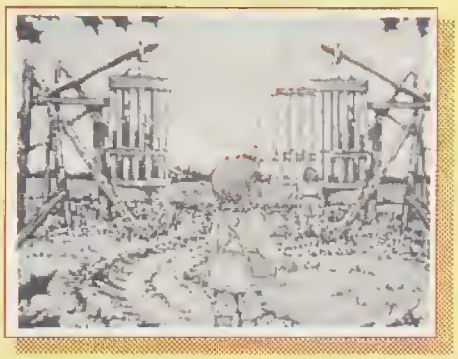
Game five is the Battle, probably the best out of the whole series. You play the warrior as he seeks vengeance back at Nockmaar Castle. First you have to duck and jump spears, arrows and axes (you can take so many of these in the head before you swim the tomato sauce puddle), then you get to fight General Kael in a battle to the death. Very *Defender of the Crown*ish, but you do have total control over the warrior in this quite exciting sword fight. Once you've knocked off the General you then make your way up to Queen Bavmorda's tower.

Hence we come to game six, the Final Battle, one, I'm afraid, I've yet to ponder upon, but the instructions say the mechanics are similar to the Spellcasting section of the game. Apparently you have to complete a certain spell before Queenie makes it to the sacrificial altar to destroy the baby. Heavy stuff.

Willow is graphically superb. It features digitized pictures from the movie, with great music. The games aren't too bad on their own, which probably makes this package good value for money. I would have liked to see more emphasis placed on skill and strategy rather than just pure luck, and I am sure the computer industry has advanced enough to increase the speed of the disk drive from the software, as the game loses a lot in this area.

Packaging and documentation is of a high standard, games quite good, just make sure you have a joystick, as the mouse requires slightly too much patience. A game that is certainly big on features, and fairly big in action. Try before you buy. ❑





Fish

Fish is the name of the latest adventure by Magnetic Scrolls. A couple of months back I reviewed *Corruption*, claiming it was one of the best games on the market. Well, I don't know how they do it, but they have come up with an even more original and exciting, and totally playable adventure.

Text, vocab and graphics are of a high quality that has yet to be matched. In this game you play the role of an agent of the Department of Inter-Dimensional Espionage. You have just began taking your well earned leave - being transformed into the body of a humble goldfish relaxing in a small but quaint aquarium, when all of a sudden you are called back to duty. It seems the most dangerous group of inter-dimensional anarchists around, The Seven Deadly Fins are on the loose.

These dudes mean trouble, and it is your job to capture them. Three warp appear in your aquarium, each can be painfully entered to take you to various dimensions where you will be given different bodies. You'll find yourself trying to make coffee for a music industry executive, or following a maniac accomplice called Micky Blowtorch, to dancing about in an old ancient ruin with a bunch of hippies.

How all of this links to capturing Deadly Fins has got be beaten - but there must be a link somewhere in this totally wacky game. Graphics are excellent - bursting with colour and detail. The text

descriptions are detailed and lengthy, and very humorous. Vocabulary is also very good, with most of my commands understood with no problems.

The documentation supplied was clear and concise and a joy to read, probably the best I've ever come across. Magnetic Scrolls should not need to read a review to buy this game. Those of you in doubt, ask for a demo - you won't be disappointed.

For the Amiga and C64. Sample supplied by Questor. RRP Amiga $59.95, C64 disk $34.95.

WANDERER 3D

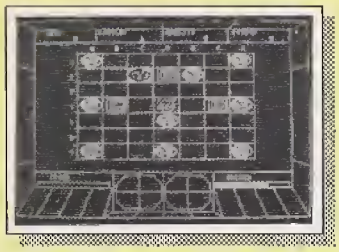
3D computer games made a small appearance during the days of the Vic-20. The few games that were released didn't make much of an impact and soon the novelty faded away. Nowadays, the C64 is being pushed to its graphic extreme, while the Amiga's full potential has only been touched upon.

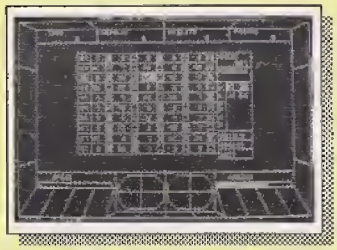
With such an advancement, a 3D game today could be quite mindblowing. Fortunately, it is the strategy players who are first to be gifted with the new state of art 3D game. *Wanderer 3D* is a science fiction strategy game which takes the player cruising the spaceways trying to save the galaxy from the clutches of the evil Vadd. The year on Earth is 3027, and the domestic cat is facing extinction. Vadd has kidnapped the last cat on Earth and has taken it to his fortress somewhere in the universe.

So begins *Wanderer 3D*. Using the cursor keys/joystick to move your ship from galaxy to galaxy, playing poker with the different beings you meet. This forms the basis for most of the game. To reach Vadd you need to win quite a few card games. The 3D effect is rather stunning, and most certainly realistic, even if wearing the specs that come with the game is a slight irritation. The game itself is very slick and professionally produced, a cross between your conventional card games and *Reach for the Stars*.

I played the Amiga version, which was quite impressive. The game is very challenging, however, it might not be everyone's cup of tea. I liked what I saw, and I actually found myself trying to avoid the objects around me. How's that for realism?

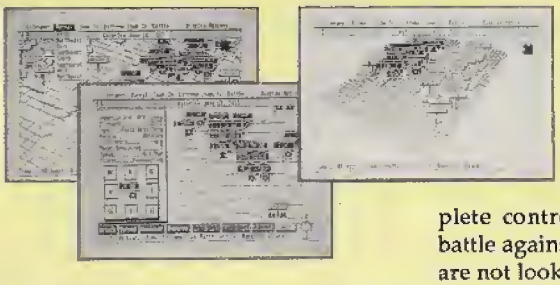
Review copy supplied by Questor. RRP Amiga $49.95, C64 disk $34.95, cassette $24.95.





UMS

The Universal Military Simulator



The Universal Military Simulator is exactly what the title suggests, you can program it to simulate any historic battle, or invent any battle in the future. All the battles appear on a mountainous 3d grid, with black and white flags depicting each individual unit, town or site. The screen can be fairly cluttered, so you can use the zoom option to narrow in into any part of the battlefield.

The game is entirely menu and mouse driven, and the method of each side taking turns is used. The player/s have complete control over the game. You can battle against the computer, and if things are not looking too good, you can switch control of sides to give yourself an unfair advantage. You can even force the computer to attack or defend! Heck! It's just a computer game!

Plenty of info on the screen can be called up to give you enough statistics on each unit to fight any battle. Other options include the save/load option, the print battlefield option, and not forgetting the create/edit option, enabling you to easily invent or recreate any form of battle you wish. Five scenarios come with the game, together covering the past two thousand years.

These are the Battle of Arbela (331 BC - an Asian battle fought on chariots, elephants and horses), the Battle of Hastings (1066 AD - the famous battle between the Saxons and the Normans. A simple battle which provides a good introduction to the features of the simulator), the Battle of Marston Manor (1644 AD), the_Battle of Waterloo (1815 AD - another famous battle, between the Duke of Wellington and Napoleon Bonaparte), and finally Gettysburg (1863 AD).

The game is supplied with two excellent handbooks, one explaining clearly with screen shots and examples the features and playing instructions, the other giving a detailed description of each of

the scenarios. Two disks are included in the very well presented package.

Resident wargamer Barry Bolitho couldn't get into this game, he felt that it was perhaps lacking the atmosphere and colour of the current wargames on the market. He found the screen to be rather an eyesore to watch and keep track of.

Please note that we only played this game on a 512K Amiga, as the manual does boast enhanced graphics and sound with 1 MEG memory. There are many more features of the game - too many to fit in this short review. It is definitely a strategy game that many wargames will love, while many others will not. You be the judge.

Two scenario disks are available at extra cost, these are Battles of the American Civil War, and Battles of Vietnam. Both are very well documented. More scenario disks are promised.

Universal Military Simulator + scenario diskettes. For the Amiga (min 512k). Review copies supplied by Questor. RRP $59.95.

New Adventure Releases

Scary Mutant Space Aliens from Mars is the new space comedy from Readysoft. To be reviewed in next month's Realm, the game features colourful detailed graphics and animation along with digitized sound effects.

Freedom is the latest adventure/strategy game from Coktel Vision and Pactronics. You play the leader of a slaves' revolt, set in the 18th century at a tropical cigar plantation. Also to be reviewed soon in the Realm.

A new wargame release is*Tank Attack for the C64*, a game that combines computerised strategy with traditional board games. To be reviewedby Barry Bolitho soon.

That's all in the Realm this month. In the meantime I'll be sifting through all your mail and supplying you with enough problems and clues to last a lifetime, as well as a new debate!

The Dungeon

By Kamikaze Andy

You lucky C64 owners will soon be able to get the *Ultima Trilogy* from Origin. This special pack contains the first three *Ultimas* at a discount price. Also from Origin is *Tangled Tales: The Misadventures of a Wizard's Apprentice*, which is an introductory icon-driven rpg for the C64. For Amiga owners, upcoming goodies include *Pool of Radiance*(SSI), the delayed *Land of Legends* (MicroIllusions), Wastleland (Interplay), and *Fairy Tale II* (MicoIllusions). Finally, traditional adventure-house Sierra will release a fantasy, *Hero's Quest* late this year.

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Guide to contributors

EVERY MONTH WE receive dozens of submissions from would be writers. For these we are most grateful. If you have considered writing for the *Australian Amiga and Commodore Review*, here's a few guidelines. The majority of contributions are accepted, however as we have a larger number to choose from these days, a few more stringent guidelines need to be met.

Style: Easy to read, entertaining and informative. We aim to be an enjoyable easy to read publication - with a smattering of technical articles for those so inclined. We are most interested in tutorials, "how to" type articles, and general hints and tips. Programs are also sought after for our disk magazines, Suite 64 and Amiga Live!

Format: Don't include any formatting such as printer controls, centred headings, print styles etc. Put a space after commas or full stops. Do not indent paragraphs. Numbers under 10 should be typed. We prefer contributions on disk - Commodore 64/128, Amiga, MS-DOS and even Macintosh. Don't double space. Just a straight ASCII text file is all we require. We also accept contributions via modem once you become a regular contributor. Baud rates of 300, 1200, 1200/75 and 2400 are supported.

What to include: A brief letter, if it's your first effort. Your phone number - this is the most important thing! And put your name at the top of the actual article, not just on the letter.

What you get: Fame and a little fortune. Writing is a lot of fun. You'll get payment of $50 per 1000 words - paid about one or two months after publication and a free subscription to the magazine after your third article. We take receipt of the article as permission to publish - you may not always be contacted before we use your article.

Where to send contributions: Post articles directly to *The Australian Commodore and Amiga Review*, 23 Bonnefin Rd, Hunters Hill. Or call (02) 817-0011 to arrange modem transfers.

Don't send us your original - we cannot guarantee return, and it may become damaged in the post. Send 5 1/4 inch disks in an Australia Post cardboard Post Pak especially designed for carrying disks. Do *not* use padded post bags - these have a tendency to make the postman want to bend them in half. Amiga disks can just be sent normal mail.

That's it! For a more detailed version of the above, call our office and ask for the complete writers guide. ■

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